Future Jobs Pilot Project Report

2007 – 2010

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Executive Summary

It was just over two years ago that Future Jobs initiated programs to promote workforce-development activities in Clark and Greene Counties. Our focus has centered on creating, enhancing and producing a pipeline of skilled workers to fill critical technology and science internships and jobs right here in Ohio. We set out to focus on healthcare information technology (HIT), and expanded that target somewhat to reach related disciplines also in high demand – especially high throughput computing and software development, specifically around geospatial intelligence and imaging analytics.

The Future Jobs model does not seek to reinvent the wheel, but rather expand upon existing infrastructure to infuse a STEM component and expose more local students to the current and future job market in our area. We have reached students starting at the high school level at Clark Shawnee and Springfield City High Schools, extending to the community college, undergraduate and graduate schools and universities including Clark State Community College, Central State University, the University of Dayton and Wittenberg University. In addition to these partnerships, we have many local area employers at the table providing input on vital job and internship skills and qualifications, as well as current and future job openings. Our employer partners range from small start-up businesses to Ohio's largest single-site employer, Wright-Patterson Air Force Base.

Since our inception, we have reached more than 1,000 local students through Future Jobs programs, outreach activities and internships. For example, we funded efforts at Clark Shawnee and Springfield High Schools to grow the nationally recognized Project Lead the Way Program, with its emphasis on engineering and mathematics. At Clark State, we funded efforts to create a new Geospatial Certificate and Associate's Degree program. At Wittenberg, we funded several programs, including Saturday Science, Upward Bound and new curriculum in the Computer Science Department. At Central State, we funded a new STEM summer bridge program for incoming freshman students to expose them to STEM majors and careers. Finally, with the University of Dayton, we funded a new laboratory in remote sensing that is conducting ground-breaking research in wide-area surveillance.

To culminate the pilot project and complete the pipeline, we created and funded a new internship program, boosting total internship placement through Future Jobs to 70 students on-site in Ohio businesses. These internships have already resulted in part-time and full-time positions for many students. As the pilot project winds down this fall, we will continue to monitor our student interns and gather data on where they seek employment after graduation. Their internships have provided them with critical training making them ready to fill available jobs within the area upon graduation.

Despite the economic conditions that we encountered throughout the pilot project, we remained focused on our mission to deliver the intended results of our original proposal to the state. Commitment of the Future Jobs partners remained correspondingly strong, including significant partner support in many forms throughout the pilot project, especially the Future Jobs Working Group.

The enclosed report gives a detailed description of the Future Jobs pilot project and the work that has taken place over the past three years. It is our pleasure to present these results and wrap up a successful pilot project and recommend key next steps to build on this foundation.

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Opening Remarks

Future Jobs has not attempted to be all things for all people. Rather, it has leveraged its resources from the State of Ohio ($1 million over two years) and invested in four higher education institutions -- Clark State, Central State, Wittenberg and UD -- two high school districts in Clark County and ultimately invested in students through internships financed or facilitated by Future Jobs and its employer partners.

Future Jobs focused on four key programmatic questions in screening and selecting proposed projects. We asked whether a proposal would:

- Contribute toward creating and enhancing college curricula preparing students for jobs in healthcare data analytics and imaging diagnostics, both medical and geospatial?
- Expand awareness and focus interest on career opportunities more broadly available in Science, Technology, Engineering and Math (STEM)?
- Provide a workforce needed currently and in the near future by employers?
- Encourage collaboration across the private sector, academia and government in target achievement areas for Future Jobs?

Additionally, Future Jobs has strived not to create brand new programs where possible, but instead finance and otherwise expand support for existing programs at educational institutions where they could deliver on our mission. This has been important in demonstrating a partnership approach to the institutions, whether universities or secondary education, and also in maximizing funds available for helping students and their schools, rather than on program administration and other overhead.

Proposal Goals

1. Increase the number of students taking and mastering high-level STEM courses and pursuing STEM careers in Ohio across demographics.
2. Increase the number of students pursing professional HIT careers upon receiving technical education and professional experience in HIT related careers across demographics.
3. Unify career and workforce development, preservation and public education efforts among schools, career centers, post-secondary programs, and employers in the region.

Project Background and Evolution

The Ohio Future Jobs pilot project had its inception in early 2007 as business leaders convened together with state government representatives, university and academic leaders, and officials from Wright-Patterson AFB. They sought to prepare a workforce to fill anticipated employment opportunities resulting from the Base Realignment and Closure expected in 2011. With contributions from all forming the basis of a proposal, Future Jobs began its journey as an employer-driven initiative.

The project was confirmed for funding in July 2007 by the State of Ohio and initiated activities in early 2008 following the appointment by the Future Jobs Board of an executive director, Eileen Austria, former district director for Congressman Dave Hobson. Clark State agreed to serve as fiscal agent. Project activities were most heavily concentrated between June of 2008 and August of 2010.

The original Future Jobs proposal requested more than $3M for the pilot project, with a broader, more regional focus. Following the receipt of $1M in funding, the geographic scope of the project was narrowed to focus primarily on Clark and Green counties, with continuing leadership and participation by the University of Dayton. In addition to programs at the four-year institutions and community college level, Future Jobs recognized the need to offer more specialized STEM experiences to prepare area high school students for college courses in our region.

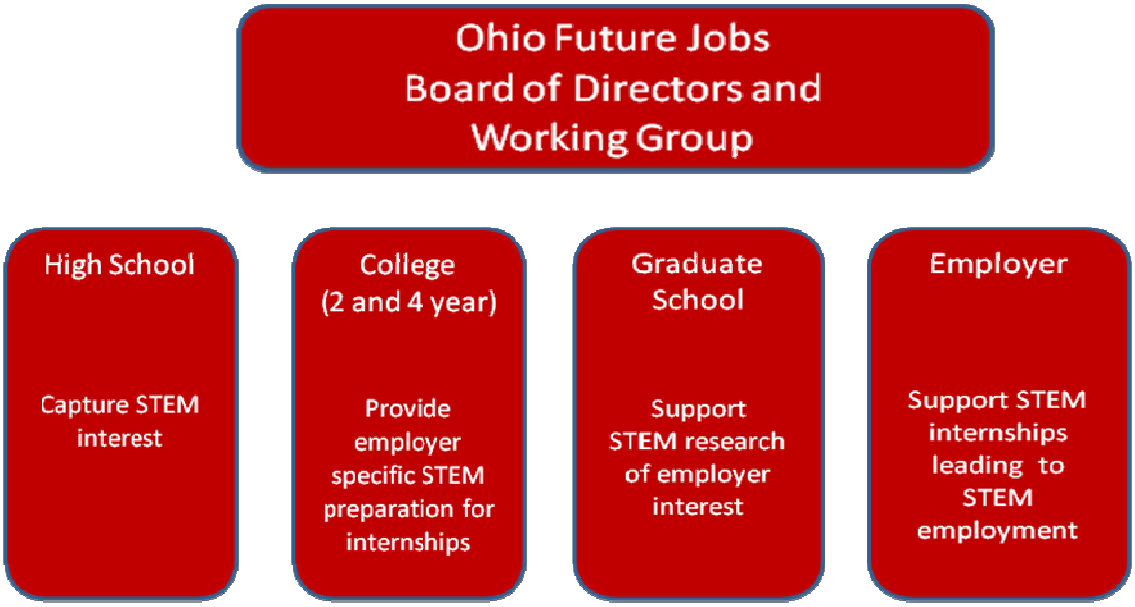
During the pilot phase, Future Jobs has made several strategic investments in workforce and career pathway development in the Dayton-Springfield region. These efforts were most commonly providing funds to bring a STEM, health information or image processing emphasis to existing programs, taking full advantage of existing programmatic infrastructure in place for these programs.

Even as priorities evolved, and the economic climate worsened, Future Jobs partners sustained their strong support for the program. Partner commitments of resources included both cash gifts totaling more than $200,000 and in-kind donations such as staff time and office space. These contributions were essential to maximize use of state funds for programs directly benefitting students. Private donations, for example, have provided more than 90 percent of resources needed for overall program management and back-office activities. Additionally, representatives of the employer groups – both public and private -- and academic institutions have participated regularly in Working Group sessions that generated program concepts and implemented them, on a volunteer basis. During the past two years, these representatives contributed many hundreds of hours to Future Jobs, at no cost to the initiative. Also, private-sector executives whose employer participated in Future Jobs made equity gifts to support scholarship endowments for students and research initiatives at Central State, Clark State, UD and Wittenberg. They will support student participation in such programs as medical and geospatial imaging research.

The pilot program and its charter members also supported student learning in the targeted industry sectors by creating and managing placement of 70 student interns. This program will be a key component of the Future Jobs bid to participate in a newly funded $100 million State of Ohio initiative that centers on internships as an important element in attracting and retaining talent in Ohio, especially in the sciences and technology, needed for economic growth. Our bid to participate will build on previous efforts by Future Jobs to secure additional, non-state funding. Economic conditions did not allow some foundation and other private commitments to be fulfilled or solicited, and publicly funded programs that in 2007 were seen as potential funding sources were reduced, or eliminated. Still pending is a proposal before the National Science Foundation that draws upon our unique partnership of businesses and academic institutions and across ages and demographics.

While a few tasks remain to be completed, it is clear that among the most notable achievements has been providing an impetus to help jump-start regional workforce-development initiatives in the STEM, image processing and health information sectors. Initiatives launched or enhanced with Future Jobs support include the geospatial certificate at Clark State Community College; wide-area surveillance research at the University of Dayton; the Central State STEM Summer Bridge program; and Wittenberg University's Science Saturday program. These programs will have lasting residual impact to help attract and prepare the region's workforce for sustainable, well-paying, high-tech jobs.

Organizational Structure



- Project Lead the Way
- STEM Upward Bound
- Saturday Science

- Summer Bridge for STEM
- Faculty Externships
- Early Student Internships
- HIT Curricular Development
- GIS Certificate Programs

- Surveillance
- Image Processing

- Funded Internships

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Future Jobs Working Group

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Andrea Frederick, Internship Coordinator – Future Jobs*
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Ricardo Negron – Air Force Research Laboratory, Director of STEM Initiatives
Sarah Hackenbracht – Greater Dayton Area Hospital Association, Director of Workforce Development
Dr. Jason Parker – Innovation Center at Kettering Health Network, Senior Scientist, MR Physicist

**Note: See appendix A for Future Jobs staff job descriptions*

Future Jobs Partners Summary

Wittenberg University is a nationally recognized four-year private college for the liberal arts and sciences located in Springfield, Ohio. Wittenberg's traditional strengths have been in the liberal arts, but recently the Computational Science Department has developed coursework in data analysis and visualization as well as software and web development to meet increasing industry needs.

Clark State Community College is a two-year institution with campuses in Clark and Greene counties in Ohio. Clark State enrolls approximately 3,600 students that range from all age groups including recent high school graduates to dislocated workers seeking a certificate. Clark State recently developed a Geospatial Associate's Degree focused on photogrammetry, cartography, geographical information systems, global positioning systems, and remote sensing.

Central State University in Wilberforce, Ohio, is one of the nation's oldest historically black universities, with a 120-year legacy of academic and athletic achievements. The College of Education, the College of Arts and Sciences, and the College of Business and Industry, which includes the Departments of Manufacturing Engineering and Water Resources Management, form the core of the University's varied academic offerings.

The University of Dayton is a nationally recognized four-year private institution offering undergraduate, graduate, and, doctoral-level degree programs. At the undergraduate level, UD offers more than 70 high-quality programs in four accredited divisions. UD also provides premiere graduate programs in remote sensing, persistence surveillance, and high-speed image processing.

Springfield City Schools offer a variety of programs and services for students, preschool through twelfth grade, one high school, four middle schools, ten elementary buildings, and an alternative school for special needs and at-risk students. Springfield high school students participate in Project Lead the Way to gain skills in STEM-focused areas.

Clark Shawnee Local Schools are located in Clark Country and provide education for students in grades k-12. Clark Shawnee is recognized for their programs for gifted students as well as students with special needs. Clark Shawnee high school students participate in Project Lead the Way to gain skills in STEM-focused areas, particularly engineering.

The Air Force Research Laboratory is headquartered at Wright-Patterson Air Force Base, the largest single-site employer in Ohio. AFRL is the Air Force's only organization wholly dedicated to leading the discovery, development, and integration of war fighting technologies for the nation's air, space and cyberspace forces.

Qbase is a privately held provider of data-management and geospatial intelligence solutions and a full spectrum of information technology services, with specialties in high throughput computing and data analytics and visualization. Qbase's primary offices are in Dayton and Springfield, Ohio, and Reston, Virginia.

CACI is a large international company providing professional services and IT solutions needed to prevail in the defense, intelligence, homeland security, and federal civilian government arenas. CACI specializes in enterprise IT and network services, cyber solutions, integrated security, and intelligence solutions.

Avetec is a small non-profit organization located in Springfield, Ohio providing research and innovation in modern aerospace engineering and commercial aviation. Avetec specializes in modeling and simulation research, data intensive computing, and STEM education initiatives with local schools and universities.

UES is a medium-sized employer located in Dayton, Ohio with over 37 years of experience in science and technology. UES has a reputation for providing superior, world-class, on-site scientific, technical, and research support to government agencies and industry partners. UES specializes in investing in-house laboratories where they transition scientific innovations into commercially available products and services.

Woolpert is a large national firm that integrates services and applies technologies to benefit the federal, state, and private-sector industries. Woolpert specializes in seven core areas including architecture, engineering, enterprise information management, geospatial, planning and design, surveying, and water management.

The Greater Dayton Area Hospital Association started in 1936 as an informal communication forum amongst local hospital CEO's. Since then, GDAHA has grown into a full service not-for-profit association whose primary focus is the quality of healthcare. GDAHA is the central collection point for hospital data which is used for the analysis of trends in healthcare services, the employment market, and furthering quality initiatives.

Supported Activities Overview

The original proposal outlined seven objectives for the pilot project, listed below. As can be expected in a well-integrated program, activities supported multiple objectives and each objective was supported by multiple activities.

- **Objective 1:** Inspiring today's youth and tomorrow's leaders to pursue enjoyable careers in science, technology and mathematics, particularly as it relates to the medical and graphics field
- **Objective 2:** Establish health information and image processing career 'gateways', enabling individuals with varied levels of experience and education to enter the field
- **Objective 3:** Developing coordinated educational curriculum across institutions to aid the career advancement of the individual
- **Objective 4:** Educating the community at large on the value and personal rewards of careers in the medical and image processing field
- **Objective 5:** Engaging and recruiting local talent to establish professional careers within the region
- **Objective 6:** Promoting the excellent regional opportunities for careers in the health information and image processing areas
- **Objective 7:** Providing key resources to career centers, high schools and middle schools throughout the region to enlist in inspiring students of tomorrow for HIT and STEM careers

For each funded activity, the following table identifies the corresponding supported objective.

Activity	Supported Objective
Data Analysis Course – Wittenberg University	2,3
Summer Bridge Program – Central State University	1
Upward Bound Program – Wittenberg University	1, 6
Externships and internships – Wittenberg University	5
Website Development by Geek House – Wittenberg University	4, 5, 6
Geospatial technology certificate – Clark State Community College	2,3
Wide-area surveillance research facilities – University of Dayton	2
Project Lead the Way – Clark Shawnee	1, 7
Project Lead the Way – Springfield City Schools	1, 7
Internships	5,6
Net Incubator – Central State University	5
Saturday Science – Wittenberg University	1

For each objective, the following table identifies the supporting activities funded in the Future Jobs pilot project.

Objective	Future Jobs Supported Activities
Objective 1: Inspiring today's youth and tomorrow's leaders to pursue enjoyable careers in science, technology and mathematics, particularly as it relates to the medical and graphics field	• Summer Bridge Program - Central State University • Upward Bound Program – Wittenberg University • Project Lead the Way – Clark Shawnee • Project Lead the Way – Springfield City Schools • Saturday Science – Wittenberg University
Objective 2: Establish health information and image processing career 'gateways', enabling individuals with varied levels of experience and education to enter the field	• Data Analysis Course – Wittenberg University • Geospatial technology certificate – Clark State Community College • Wide-area surveillance research facilities – University of Dayton
Objective 3: Developing coordinated educational curriculum across institutions to aid the career advancement of the individual	• Data Analysis Course – Wittenberg University • Geospatial technology certificate – Clark State Community College
Objective 4: Educating the community at large on the value and personal rewards of careers in the medical and image processing field	• Website development by Geek House – Wittenberg University
Objective 5: Engaging and recruiting local talent to establish professional careers within the region	• Website development by Geek House – Wittenberg University • Externships and Internships – Wittenberg University • Internships – all schools • Net Incubator – Central State University
Objective 6: Promoting the excellent regional opportunities for careers in the health information and image processing areas	• Upward Bound Program – Wittenberg University • Website development by Geek House – Wittenberg University • Internships – all schools
Objective 7: Providing key resources to career centers, high schools and middle schools throughout the region to enlist in inspiring students of tomorrow for HIT and STEM careers	• Project Lead the Way – Clark Shawnee • Project Lead the Way – Springfield City Schools

Future Jobs Funded Projects

Future Jobs has supported our academic partners in developing cutting edge laboratories and curricula to help prepare students for the job market since 2007. Our projects are employer-driven in nature and reflect the skills and training our employers need to fill their jobs openings. These projects in addition to our internship program encourage students from high schools and colleges to seek out new and interesting fields that will be growing in the future. Essentially, our programs create a pipeline of students to fill existing and future high-paying technology driven jobs right here in Ohio.

Geospatial Associates Degree & Certificate Program
Clark State Community College

The project is a brand new curriculum and laboratory for students to specialize in the field of Geospatial Technologies at Clark State Community College. The program established in 2008, began offering a certificate degree in Geospatial Imaging. The program expanded to offer an applied Associates Degree in 2010 with approval from the Ohio Board of Regents. The curriculum was designed and implemented in close collaboration with CACI and Woolpert to help train future professionals in this continuously growing field.

"This program is about building a new technology workforce and makes it possible for us to offer the opportunity for a select group of students to move forward quickly into good jobs", Karen Rafinski, President at Clark State.

See Appendix C for the detailed program syllabus.

Data Analysis and Visualization Curriculum
Wittenberg University

This project is a topics course that was established and taught in 2008 in the Computer Science Department at Wittenberg University. This course was designed to prepare educational modules in data integration, analysis and visualization by incorporating direct employer input from Qbase (www.4qbase.us). The course prepared students with an appreciation of data preparation, data quality, data integration and data analysis issues.

The course provides an introduction as well as valuable experience in addressing challenges for the integration of information from multiple sources such as text, web, images, and databases. The course includes a review of common industry standard formats in use today and looks at trends across several industry sectors. The curriculum provides students with a glimpse into the management and integration of volumes of assorted data and data sources that would exist in a company such as Qbase.

The project also provided support to bring leading-edge parallel computing technologies onto the University campus to provide an educational environment that closely resembled emerging commercial operational environments, similar to those at Qbase.

Note: See Appendix B for details on the course objectives and class projects

Saturday Science
Wittenberg University

Wittenberg Saturday Science is an outreach program that started in January 2008 which exposes area high school and home-schooled students to science and technology. Eight academic departments - biology, chemistry, computer science, geography, geology, mathematics, physics and psychology are collaborating on the program. Future Jobs funded this program, and it takes place once a month on Wittenberg's campus. Each program features a public presentation by a Wittenberg faculty member on an accessible science topic, typically outside of the high school curriculum.

"We are very happy with how the program started. Last semester brought more than 60 students to Wittenberg from 15 different area schools. Feedback from both parents and students has been positive. We look forward to continuing to reach out to area students and show them the beauty and usefulness of science," Adam Parker, Assistant Professor of Mathematics, Wittenberg University.

The program has successfully delivered programs across the collaborating departments, frequently receiving write-ups in the Springfield paper and on the Wittenberg University website. More significantly, the Future Jobs initial funding has since been matched by Wittenberg University to keep the program going for a total of three years.

Upward Bound
Wittenberg University

This program provides fundamental support to students in their preparation for college entrance. Future Jobs supported Wittenberg University to infuse a STEM element into their already existing Upward Bound summer program for Springfield City High School students. The program took place in the summer of 2009 and the summer of 2010, and 24 students participated each year. The Upward Bound program encourages the participants to attend Wittenberg after they graduate high school and major in a STEM focused field.

"Future Jobs continues to be a tremendous program to connect the youth of Clark County with the world of their future. The support from Future Jobs of such programs as Science Saturday and Upward Bound help students realize the wonderful potential for both shaping and contributing in an increasingly technology rich workplace," Dr. Eric Stahlberg, Director of Computational Science, Wittenberg University.

During the first year experience, students shared in three afternoon sessions related to computational science to inspire students to seek careers in STEM. In the first session, Wittenberg computational science students lead the Upward Bound students in a session exploring computer graphics and animation and related it to science. In the second session, students built models to predict the height of a ball dropped from a second and third story building and experienced the thrill of a space shuttle launch sequence using software provided by NASA. In the final of the three sessions, the Upward Bound students visited Avetec in their original facilities and learned how scientific visualization was incorporated into future jobs.

In the second year, the emphasis was changed to focus on defining the successful pathway for students to follow to prepare professionally for the future jobs. This included a session where Wittenberg's undergraduate STEM admissions counselor shared thoughts on how to prepare for college and pursue scholarships. In the same session, the students also heard from Andrea Frederick about internships and how these prepare students for future employment. Another session included a visit to Avetec's new facilities, and a discussion with their interns, and a presentation from a major from Wright-Patterson AFB on opportunities in STEM at the base.

This experience also provided the basis for a future NSF proposal that was selected for funding to help support students in need with financial resources to pursue STEM related careers at Wittenberg. Named ACTIVATE, this nearly $600,000 project was awarded in December 2009 and has the first ACTIVATE scholars scheduled to arrive on campus in fall of 2010.

Externships & Internships
Wittenberg University

Future Jobs funded several internships and externships for area students and faculty in order that both would gain experience in a professional work environment.

Externships: In summer 2008, Dr. Steven Bogaerts, Assistant Professor of Computer Science on his first summer after beginning teaching at Wittenberg, participated in a 10 week internship at the Research Institute at Nationwide Children's Hospital (TRINCH). During this experience, Dr. Bogaerts gained valuable insight into not only the needs, challenges and opportunities in a major health information organization, but also learned first-hand the types of challenges and individual effort that his students will face when they graduate and seek employment.

In the summer of 2009, Dr. Bogaerts participated in a ten week internship with the Center for Healthy Communities in Dayton, Ohio. This internship added breadth to Dr. Bogaerts experience in health information as he gained another perspective on how a health information organization establishes infrastructure to exchange medical records. Dr. Bogaerts has already adapted his teaching approach to incorporate lessons learned.

Also in the summer of 2009, Dr. Brian Shelburne, professor of mathematics and computer science, participated in an internship with IDCAST. In this experience, Dr. Shelburne was able to learn about leading edge computing technology involving field programmable gate arrays (FPGA). This externship contributed to Dr. Shelburne's interest and subsequent actions to incorporate FPGA technology into his computer hardware course.

In both cases, these externships served to positively influence the faculty members, motivating them to incorporate added real world experiences into their teaching.

Internships

Through this early pilot and the more developed Future Jobs internship program, several Wittenberg students received support from Future Jobs to pursue internships in fields related to STEM, image processing, health information, bioinformatics and data analysis. Students had opportunities for meaningful internships working at venues such as Nationwide Children's Hospital, UES, JJR Solutions and the US Air Force Research Laboratory's Human Effectiveness directorate.

Website Development & Geek House
Wittenberg University

Future Jobs funded students at Wittenberg University's new Geek House to develop the initial Future Jobs website. This award supported the students to learn about working on a software project, defining requirements, selecting colors and logos and testing the application. The project also involved faculty members who provided guidance and advice in the process. The website was subsequently enhanced by another Future Jobs student intern from Clark State Community College.

Future Jobs Summer Bridge Program
Central State University

This program is a four-week summer bridge program focused on STEM disciplines at Central State University that started in 2008. The Future Jobs STEM Summer Bridge Program is designed for incoming freshman majoring in the STEM disciplines to give them the basic tools needed to succeed throughout their matriculation at Central State. 26 students have participated in the Future Jobs Summer Bridge Program during the summers of 2008 and 2009 and all participants are still enrolled at CSU.

During the four weeks, students have the opportunity to learn about the importance of STEM and career paths they can take to find jobs right here in Ohio. The program wraps up with a capstone research project where each student presents information on a specific STEM-related topic. "Future Jobs funding and support of the university's science based Summer Bridge Program exemplifies a strong partnership committed to building sustainable jobs and a quality next generation workforce for Ohio," John Garland, President at Central State.

See Appendix D for the detailed program syllabus.

Net Incubator
Central State University

The Net Incubator is an independent corporation and an affiliate of Central State University located at Nextedge Technology Park in Springfield. The Net Incubator serves technology companies to help commercialize advanced materials, renewable energy, sensor and information technologies to stimulate economic development. Future Jobs has supported the growth and development of the Net Incubator as well as its tenants through training workshops, mentoring and assessments, and research grants which have funded student interns working on projects.

"Future Jobs funding and support of the university's science based Summer Bridge Program and relocation of its National Environmental Technology Incubator exemplifies a strong partnership committed to building sustainable jobs and a quality next generation workforce for Ohio," John Garland, President, Central State University.

Image Processing Graduate Research Laboratory
University of Dayton

This program was started in May of 2009 in the Graduate School at the University of Dayton. It was developed by UD's staff of talented professors and researchers and close collaboration with geospatial companies in the Dayton, area. It is designed to tackle and explore solutions for the analysis of image sensor data that can be acquired from an array of cameras. This research will be used for government and private sector businesses that want to enhance geospatial technologies for use by the US military.

This program focuses on algorithms and also tries to create a working model that can incorporate periodic updating of the present models, auto-focus capabilities of multiple camera arrays, and proper image registration. This initiative has improved camera models that are necessary for the seamless integration of multiple camera data with the aid of several graduate students and faculty. Three students and one professor have made strides in research that will soon be developed into UD's curriculum. These students have also gained exposure and built relationships with area companies that can benefit from this research.

Project Lead the Way
Clark Shawnee High School

This program at Clark Shawnee High School expanded upon the nationally recognized Project Lead the Way (PLTW) program. Future Jobs supported training two teachers in three classes for PLTW; Principles of Engineering Design and Introduction of Engineering Design and Digital Electronics. In the 2009-2010 school years, Clark Shawnee High School offered three classes of Principles of Engineering Design and Introduction of Engineering Design. In the 2010-2011 school years, Clark Shawnee will continue the engineering classes and will add the Digital Electronics course. Recently, one of the students in the PLTW program was asked to take their project to the National Convention.

"Shawnee High School is pleased to be a part of the Future Jobs initiative. It afforded us the opportunity to provide the exciting Project Lead the Way curriculum to our high school students. The first course offered Introduction to Engineering Design has 20 students enrolled which is the maximum. Approximately 18 other students were turned away from the program since this is our pilot year. We anticipate doubling our enrollment in the Introduction to Engineering Design course next year, as well as adding the Principles of Design class to our curriculum," Debbie Finkes, Superintendent, Clark Shawnee Schools.

Project Lead the Way
Springfield City Schools

Project Lead the Way (PLTW) is a nationally recognized program which prepares the 21st century workforce with the analytical and problem-solving skills that are and will be needed by area businesses. This program at Springfield City Schools provides a pre-engineering course which results in the ability for students to enter college with significant college credit. Future Jobs worked with Springfield City Schools to provide funds for equipment, supplies and teacher training needed to help support the implementation of year three of the program and the new Digital Electronics course.

Year three of PLTW introduces students to Digital Electronics, which is a course in applied logic encompassing the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Implementation of this course was required in order to meet PLTW requirements allowing students to gain college credit for the program.

Future Jobs Internship Program
Future Jobs

The Future Jobs Internship Program places Ohio in the forefront of internship experiences for young professionals in disciplines ranging from health information to high throughput computing. Combined with the disciplines of sensors and image processing, these four sectors integrate to provide the basis for a rewarding and well-paying professional career. This program built on earlier internship programs, in 2008-09, created by Future Jobs employer partners with assistance from the Ohio Third Frontier initiative.

Future Jobs supported interns as part of Wittenberg University's internship and externship pilot effort and by expanding internship recruitment and placement with employer partners of Future Jobs. This experience provided a foundation for the larger internship effort in the latter stages of the project. Seven Wittenberg students were funded on internships as part of this initial pilot effort.

The Future Jobs Internship Program funded 22 internship experiences over the 2009-10 academic year, with more than 40 additional internships provided by private Future Jobs employers in 2008-10. The program uses strong employer and institutional support to deliver a world-class opportunity for students. Prepared and supported through the experience, the institution and employer involvement in all facets of the student experience from education to employment, is a proven Future Jobs formula for success. Notably, by March 2010, 14 interns (12 private-side funded, 2 state-funded) had been offered full time positions with their companies after graduation. Two interns were offered internship extensions on their company's payroll while they are still finishing their degrees. An overview of key statistics for the Future Jobs funded internships is provided below.

Our interns have worked for the following companies, all in the Dayton-Springfield region:

-UES
-Qbase
-Avetec
-Lexis Nexis/Reed Elsevier
-The Wright Brothers Institute
-Future Jobs
-JJR Solutions
-Accelerated Data Concepts
-Open FPGA
-KLSS, Inc.
-CACI
-Zia Systems

See Appendix E for the Future Jobs Internship Manual, which includes the detailed process of how interns were recruited and the evaluation process
See Appendix F for detailed position descriptions of each internship position funded by the Future Jobs Internship Program.

Future Jobs Funded Internship Overview Data*

Total Number of Student Interns (2009-2010)	22
Male Student Interns	15
Female Student Interns	7
Undergraduate Student Interns	16
Graduate Student Interns	2
Two-year Associate Program Student Interns	4
Offers for full-time employment	2
Employer paid internship extensions	2

Majors of Students

- Computer Science
- Management Information Systems
- Engineering
- Business
- Computer Engineering
- Computer Networking
- Chemistry
- Psychology
- Computer Information Systems

Student Intern Breakdown per Institution

- Clark State Community College – 4
- Central State University – 2
- Wright State University – 5
- University of Dayton – 5
- Wittenberg University – 5
- Wilberforce University - 1

Student Internship Positions

- Software Engineering
- Information Technology
- Website Development
- Data Analytics and Modeling
- Geospatial Imaging
- Intelligence Research
- STEM Education
- Management Information Systems
- STEM Marketing and Public Relations
- Biochemistry

*Summary data does not include details for additional internship opportunities provided by Future Jobs employer partners during the same 2009-2010 period.

Future Jobs Employer Partner Internship Programs

The importance of the internship program support and experience of Future Jobs employer partners in the success of the Future Jobs pilot project cannot be overstated. The established programs of employer partners provided the foundations for the internship program customized for the Future Jobs objectives. During the course of the Future Jobs project, these established employer partner internship programs provided many additional opportunities for students from the region above and beyond those directly funded by the Future Jobs program. Future Jobs employer partners provided over 40 additional internship opportunities for students during the project period, involving additional in-state institutions including Cedarville University, the Ohio State University, Mount Union College, and Miami University.

Promotion and Outreach

Future Jobs engaged in regional outreach efforts to raise the visibility of the pilot project and to share the successes with other communities statewide. Future Jobs participated in three major conferences as well as many career fairs. In addition, Future Jobs provided sponsorship support for the first Dayton Region Choose Ohio First Conference in October 2009.

Conferences:

- Ohio Economic Education Summit in Columbus, Ohio
- Ohio STEM Conference in Columbus, Ohio
- Dayton Region STEM Conference at Sinclair Community College

Career fairs at local colleges/universities:

- University of Dayton
- Wright State University
- Wittenberg University/Clark State Community College
- Wilberforce University
- Central State University

Additional promotional activities were pursued through the creation of the Future Jobs website (www.ohiofuturejobs.org) and subsequent printed materials.

See Appendix G for the Future Jobs Internship Brochure.

Lessons Learned

There were many lessons learned throughout the pilot project that have potential to influence and enhance the success of future employer-driven workforce development projects. These lessons are listed below.

1. Ongoing monthly Future Jobs Working Group meetings have been critical to establish relationships and foster cooperation among the educational and employer organizations.
2. Employer workforce needs change more rapidly than the educational institutions can typically respond.
3. The lack of ability to forecast economic trends in Ohio impacted the number of available employer opportunities, specifically in geospatial image processing
4. Smaller employers are able to provide timely decisions and react more quickly than larger established organizations and companies.
5. Top level support is essential from both employers and educational institutions for developing cooperative proposals in a timely and effective manner.
6. STEM focused activities will attract and interest high school students in STEM oriented careers.
7. Employers benefit greatly from independent efforts to recruit and qualify students for specific internship opportunities. Small and startup-businesses benefit proportionately more because of their small size and generally limited time and resources to focus on recruiting students.
8. Externships providing non-academic experience for faculty members are likely the greatest single activity that will align employer and academic interests in professional development of the student. Faculty experiences are more quickly integrated into existing courses with real-world examples.
9. Available funding brings more people to the table. Not surprisingly, when money is available for projects, the number of participants increases.
10. Subsidized internships are essential to create internship opportunities in some of the smallest and fastest growing businesses. Some businesses, due to economic conditions, may not be able to provide effective opportunities for even subsidized student interns.

Recommendations

The Future Jobs Pilot Project activity has been generally successful in its goals to seed employer-driven workforce development efforts in Clark and Greene County. The following recommendations are offered for other similar employer-driven workforce development and internship project efforts.

1. Secure top-level support from both regional employers and academic leaders at all educational levels throughout the duration of the project.
2. Maintain an active cross-organizational working group focused on selection and effective implementation of the supported activities. Be sure to include a discussion of broader issues in regular meetings.
3. Universities should work closely with employers early to incorporate new areas of research into curricular programs.
4. Support faculty externships as a means to quickly integrate employer driven needs into the classroom.
5. Support efforts to increase the quantity and quality of student resumes and efforts to recruit and match students to available internship opportunities within the region.
6. Support subsidized internships as a means to assure early acceptance of students into small and early-stage businesses.
7. This employer-driven, regional public-private partnership could be replicated around the state, adding a crucial element of regional agility in the preparation of a technology-oriented workforce to meet the demand for future and current high-tech jobs in Ohio.

Summary

The Future Jobs pilot project has provided valuable insights into how to achieve success in an employer-driven workforce development initiative, and what challenges must be overcome.

- In nearly all cases, the long-term value of Future Jobs for the involved institutions and organizations was more than $10,000, the baseline for the largest category. These sums do not include value to the primary beneficiaries, the students.
- The program has also been effective in attracting students into STEM majors.
- The pilot project prepared students well for professional experiences, from both academic and employer perspectives.
- In several cases, the project succeeded in integrating more employer relevant curricula.
- In all cases, the program raised interest and support of STEM programs.
- Hundreds of students were impacted directly or indirectly by the program.
- Several sustaining regional efforts were launched with the help of Future Jobs.

Several comments from stakeholders surveyed about strong points and areas for improvement capture key points from the pilot project:

"The program was extremely successful in assisting Central State students prepare for the academic rigors of college and their pursuit of a STEM degree. The forming of the Future Jobs "working group" enhanced communication between the participants and promoted unity despite each participating institution taking a different path to achieve its objectives. The leadership of Future Jobs was sound and allowed for creativity with a structured focus: STEM. Future Jobs, however, can improve through better marketing efforts to inform the public of its successes and STEM opportunities that exist locally and regionally. "

"Extremely positive. The application process was reasonable and fast, enabling us to move quickly to develop the program. Overall, it has been a very large success, which would have been impossible without the Future Jobs grant."

"Our first experience has been outstanding. We have very much enjoyed the interaction with Andrea Frederick and her ability to provide us with resumes of very qualified candidates. Not having that much experience with internships, we are unable to provide any feedback with regard to what needs to be improved upon. "

"I have enjoyed working with the Universities directly and searching for students who would benefit the most from this experience. I am very passionate about this program and believe that universities and employers need to team more to assist our youth in their education and eventual career search.

My suggestion for improvement is that the universities work with employers early on to improve their course curriculum to incorporate new areas of research. I also strongly feel that the universities should incorporate more research/laboratory site visits into their course work so that students can see how their coursework ties directly to business research. "

See Appendix H for all Future Jobs participants' survey results.

Appendix A – Future Jobs Staff Position Descriptions

Executive Director, Future Jobs

The Executive Director is responsible for leading all operations of FJ, developing and maintaining relationships with all FJ participating organizations, and informing and implementing the directions of the board of directors. This individual uses their knowledge and their network within the Clark and Greene County communities, and the greater Dayton area to identify and recruit participating organizations, and coordinate with other education/job creation organizations in order to both improve FJ's performance and reduce duplication of effort. In addition, the Executive Director is responsible for the raising funding for FJ, the management of FJ's financial resources and any FJ staffing.

Responsibilities:

- Fundraising
  - Develops and implements fundraising programs to support the activities of FJ. Identifies and secures all types of funding in coordination with the Chairman and Board of Directors.
- Management
  - Create, implement and manage budget
  - Hire, train, and manage staff
  - Document, review, and oversee all FJ funded projects
- Member Organizations
  - Recruit educational and employee organizations
  - Engage member organizations in FJ programs and projects
  - Develop relationships between FJ and member organizations, and between member organizations
- Board of Directors
  - Inform Board members of FJ activities, successes, and issues
  - Implement directives from the Board
  - Help recruit new Board members as necessary
  - Create strong bonds between Board members and FJ programs

Knowledge and skills:

- Proven broad and deep, knowledge and experience of Dayton regional educational and employer organizations
- Broad relationships with regional non-profit organizations focused on STEM programs
- Strong interpersonal and communication skills and the ability to work effectively with a wide range of constituencies in a fast-paced environment
- Knowledge of grant and state appropriations acquisition processes, and successful track record of same
- Skill in developing and implementing new strategies and procedures
- Skill in budget preparation and fiscal management
- Ability to create and edit written materials
- Ability to supervise and train employees, to include organizing, prioritizing and scheduling work assignments
- Ability to negotiate and manage contractual arrangements
- Ability to develop, plan, and implement short- and long-range goals
- Ability to communicate effectively, both orally and in writing

Education and work experience:

- Bachelor's degree
- Minimum of 10 years of experience that is directly related to community and government affairs, management, member organization relations, and working with boards of director
- Minimum of 10 years networking in Clark and Greene Counties

Intern Coordinator, Future Jobs

The Intern Coordinator is responsible for aiding the Executive Director with all operations of FJ, developing and maintaining relationships with all Future Jobs participating organizations, and recruiting, vetting, and securing intern talent in the Miami Valley region. This position will focus on developing relationships with local area university and college career center professionals to identify and prepare student candidates for meaningful internships at local area technology companies, specifically members of Future Jobs. In addition, the Internship Coordinator support efforts to obtain additional funding for Future Jobs, and assisting in all aspects of grant writing and proposal development.

Responsibilities:

- Talent Development
    - Develop and maintain relationships with local area university and college career management professionals
    - Identify open internship positions at local area technology companies and work with HR professionals to fill these positions
    - Develop a pipeline of qualified student intern candidates for hire into local companies
    - Follow-up with hired interns and HR professionals to ensure both parties have a positive, valuable experience
    - Develop criteria for qualifying and evaluating student interns and employers
- Resource Development
    - Research and identify grant and proposal opportunities
    - Assist the Executive Director in all areas of grant and proposal development as needed
    - Assist in maintaining and updating the FJ website as needed
- Coordination
    - Organize monthly meetings for all members while maintaining meeting minutes and follow-up action items
    - Engage member organizations in FJ programs and projects
    - Organize and prepare for semi-annual board meetings; duties include preparing materials, organizing meeting locations, and meeting set up

Knowledge and skills:

- Proven relationships with regional employers and educational institutions focused on Science, Technology, Engineering, and Mathematics (STEM) programs
- Strong inter-personal and communication skills and the ability to work effectively with a wide range of constituencies in a fast-paced environment
- Skill in developing and implementing new strategies and procedures for recruiting and retaining student intern candidates at local universities and colleges
- Ability to create and edit written materials
- Ability to supervise and train interns through professional development activities
- Ability to communicate effectively, both orally and in writing

Education and work experience:

- Bachelor's degree
- Minimum of 1-2 years of experience directly related to recruitment, research development, and work with local area universities and colleges including faculty, program directors, career and HR professionals

Appendix B: Wittenberg University Data Analysis Course Syllabus

Data Fusion, Analysis and Visualization
COMP 280
Wittenberg University, spring 2009

Course description:

In the knowledge economy of today, information is the foundation. This course will provide both introduction and experience in addressing challenges for integrating information from multiple sources (text, web, images, and databases), techniques for cleaning information, and introductory approaches to data mining and visualization. The course will include a review of common and industry standard formats in use today plus look at trends across several industry sectors. Particular emphasis will be placed on health-related and image processing domains. The course will blend college instructor with industry experts in a unique format bringing both theory and practice to the student.

The course is practicum-based, where students will be contributing to the construction of a larger, more capable system with their assignments.

Goals of course:

The goals of the course are to:

- Raise awareness of and issues related to management of master data records and information
- Build experience in using readily available information tools to process, improve and correlate information
- Provide industry specific and currently relevant examples of real world cases
- Construct working elements for use in a data fusion environment

Materials:

- Textbook – Master Data Management and Customer Data Integration for a Global Enterprise, Berson and Duboy
- Computing Platform – A personal laptop running Windows, Linux or Mac OS is highly recommended. Students will install several applications throughout the course.
- Software tools used – MySQL, R, Python, Java, MS-Excel, Mathematica
- Web resources – A set of web references and supplementary material will be used to maintain currency of topics.

Grading:

Grades will be assigned based on percentage of points awarded. Grading will be on a 500 point scale broken down as follows:

- Exams(2) 200
- Programming Exercises(4) 200
- Homework and Writing Assignments(2-4) 100

Staging:

The class is a two hour class meeting over 15 weeks. The following schedule is provided for student reference and may be adapted as situations dictate.

Stage 1 – Foundations for Data Fusion (3 weeks)
Topics: Review of data delivery systems; Installation and use of MySQL; Data representation in XML
Assignment – research paper to be assigned
Case example – Search Engine and Regional Health Information Organization architectures
Industry partner - none

Stage 2 – Foundations for Master Data Management (2 weeks)
Topics: Definition of master data; strategies for managing data, authority and access; overview of data sources
Assignment – Programming file recognition
Case example – CA BIG (Cancer Bioinformatics Grid)
Industry partner – Nationwide Children's Hospital

Stage 3 – Data Quality and Improvement (3 weeks)
Topics: Defining data quality; Detecting, tuning and cleansing external data; Review of external data sources
Assignment- Programming file read, translate and load
Case example – Qbase data services
Industry partner- Qbase

Stage 4 – Text Data Integration (3 weeks)
Topics: Text-based data processing; data parsing; data indexing strategies
Assignment- Programming data parsers
Case example – Search Engine Data Collection
Industry partner - OpenFPGA

Stage 5 – Image Data Integration (2 weeks)
Topics: Sources of and formats for image data; elementary image processing and feature extraction
Assignment- Programming image feature extraction
Case example – DICOM and Image standards
Industry partner – Nationwide Children's Hospital

Stage 6 – Data Analysis and Visualization (2 weeks)
Topics: SQL queries; basic data analysis and statistics; visualization for decision making
Assignment – Written and presentation - translate query results to meaningful presentations
Case example – Internal system review
Industry partner- Qbase

Appendix C: Clark State Community College Geospatial Technology Program

CLARK STATE COMMUNITY COLLEGE

GEOSPATIAL TECHNOLOGY PROGRAM
2010 - 2011 CURRICULUM

	COURSE #	COURSE TITLE	CR		PREREQUISITES	NOTES
	FALL					
____	GST 101	Introduction to Geospatial Technology	4		CPE062, CPE091	
____	DFT 211	Computer Aided Design I	4		ITS 080	
____	ENG 111	English I	4		CPE071 Bf or CPE072 Cf;Pre/Co-req: CPE062	
____	ITS 103	Information Technology Basics	3		CPE061, ITS 080, ITS 081	^
____	MTH 121	College Algebra I	3	18	CPE061, CPE103	^
	WINTER					
____	GST 120	Introduction to GIS	3		CPE062, CPE101, ITS 103	
____	ITS 12D	Beginning Database	1		CPE061, ITS 080, ITS 081	^
____	ITS 12S	Beginning Spreadsheet	1		CPE061, ITS 080, ITS 081	^
____	ENG 112	English II	4		ENG 111 with Cf	
____	MTH 140	Trigonometry	3		MTH 120 or MTH 121	
____	PHY 110	Fundamentals of Physics	5	17	CPE101; Pre/Co-req: ENG 111	
	SPRING					
____	GST 210	Georeferencing and Mapping	3		GST 101, 120, Pre/Co-req: MTH 140	
____	CSD 104	Programming Fundamentals	5		CPE061, CPE101, ITS 080	
____	EBE 100	Employability Skills	2		CPE061	
____	ENG 223	Technical Report Writing	3		ENG 111, ITS 103 or ITS 12W; Pre/Co-req: ENG 112	
____	ITS 109	Introduction to SQL	3		CPE101, ITS 12D	
____	MTH 122	College Algebra II	3	19	MTH 120 or MTH 121	
	SUMMER					
____	EBE 282	Co-Op Education I	2	2	EBE 100 and approved co-op placement	
	FALL					
____	GST 130	Remote Sensing	3		CPE103, GST 210	
____	GST 224	GIS Data Creation & Management	3		CSD 104, GST 210, ITS 109	
____	COM 121	Public Speaking I	3		CPE061, CPE071 Bf or CPE072 Cf; Pre/Co-req: ENG 111	
____	GEO 110	World Human Geography	3		CPE061 and CPE071; Pre/Co-req: ENG 111	
____	STT 264	Statistics I	4	16	CPE101	
	WINTER					
____	GST 225	Intermediate GIS	3		GST 224	
____	GST 235	Programming for GIS	4		Pre/Co-Req: GST 225	
____	GST	Geospatial Elective	3			*
____	GEO 220	World Regional Geography	3		CPE061, CPE071 Bf or CPE072 Cf; Pre/Co-req: ENG 111	
	GLG 130	Earth and Space Science			CPE061	
	or	or				
____	GLG 131	Physical Geology	5	18	CPE061	
	SPRING					
____	GST 250	Photogrammetry	4		DFT 211, GST 225, STT 264	
____	GST 270	Advanced Topics in Geospatial Technology	4		GST 225, GST 235	
____	GST	Geospatial Elective	3			*
____	PHL 205	Deductive Logic	3	14	CPE071 Bf or CPE072 Cf; Pre/Co-req: ENG 111	
			104			

^ Proficiency test available

* GST electives must total a minimum of 6 credit hours and may come from any GST, CSD, or ATI course not already prescribed or any of the following: DFT 212, MGT 200, STT 265.

Clark State Geospatial Syllabus.xls 8/9/2010

Appendix D : CSU Summer Bridge Syllabus

Future Jobs STEM Summer Bridge Program Summary

The Future Jobs STEM Summer Bridge Program is designed for incoming freshman majoring in the STEM disciplines to give them the basic tools needed to succeed in their respective program during their freshman year at College; to track, motivate and lead them throughout their matriculation at Central State University. Activities such as internships, summer research, graduate/professional school preparation, and professional development will be developed to provide a motivational track to be followed in parallel with formal classes.

Central State University conducted a four-week residential program (June 14-July 10, 2009) designed to engage participants in an intensive array of college level biology, chemistry and mathematic courses intended to give them a head start in their freshman year.

The CSU STEM Jobs Summer Bridge Program consisted of science classes, an enhancement program, an evening program and a sports/recreation program. Participants were introduced to biology, chemistry, mathematics and included activities as professional presentations, field trips and hands-on activities (daily academic schedule and pictures attached). The evening program exposed participants to methods and activities that improve study habits and increase academic achievement. Activities include sessions on time management, communication skills, study habits, vocabulary development and computer skills. The sports/recreation program instills a healthy team and competitive attitude in participants. Activities such as swimming, body conditioning, basketball and movies were included. Participants were provided dormitory housing, meals, weekend programs, and a $1,000 scholarship. Participants made power point presentation during the closing ceremony on what they learned during the four-week program (pictures attached).

Fifteen (15) incoming freshmen were registered and thirteen (13) have successfully completed the program and enrolled at Central State University.

NAME	MAJOR	CITY/STATE
Elijah Ali	Mathematics	Maple Heights, OH
L'oreal Byrd	Biology	Columbus, OH
Shatesha Carter	Computer Science	Southfield, MI
Micheal Conley	Computer Science	Detroit, MI
David Epps	Manufacturing Engineering	Detroit, MI
Lakeenen Foster	Geology	Detroit, MI
Travaughn Jones	Manufacturing Engineering	Detroit, MI
Shaniqua Lawrence	Biology	Chicago, IL
Quan Lewis	Environmental Engineering	Cincinnati, OH
Shawn Pulmore	Manufacturing Engineer	Middletown, OH
Joshua Robinson	Computer Science	Mt. Clemons, MI
Gregory Smith	Biology	Cincinnati, OH
Anthony Wiley	Manufacturing Engineering	Columbus, OH

Program Activities
Central State University
June 14 – July 10, 2009

DAILY CLASS SCHEDULE

Subject	Time	Days	Location	Instructor
Breakfast	8:00 – 8:45 a.m.		Mercer Cafeteria	
English: Reading Comprehension and Writing Skills	9:00 – 9:50 a.m.	MTWF	Wesley 211	Tom William
Time Management and Study Skills	9:00 – 9:50 a.m.	F	Mc Lin 117	Joanna Showell
Mathematics: College Algebra with EDUCO Tutorial	10:00 -10:50 a.m.	*Daily	Banneker Room 143	Asit Saha
Chemistry with inquiry labs	11:00 -11:50 a.m.	*Daily	Banneker 330	Rajeev Swami
Computer Fundamentals and MATLAB	11:00 -11:50 a.m.	*Daily	Banneker 143	Yu Liang
Lunch	12:00 -12:50 p.m.		Mercer cafeteria	
C++ Programming with Graphics	1:00 -2:50 p.m.	*Daily	Banneker 250	Robert Marcus
Biology with inquiry labs	1:00 -2:50 p.m.	*Daily	Banneker 330	Sudhindra Gadagkar
Computer Fundamentals and MATLAB	2:00 -2:50 a.m.	*Daily	Banneker 143	Yu Liang
Study session	3:00 -3:50 p.m.	*Daily	Banneker 103	
Physics with Inquiry Lab	4:00 -4:50 p.m.	*Daily	Banneker 244	Morris Girgis
Dinner	5:00 – 6:00 p.m.		Mercer cafeteria	

*Daily indicated that the classes will meet every day except for special events listed below:
Field Trip on 1st Thursday and 3rd Thursday.
Fourth of July Picnic on Saturday of 3rd week.
Final Presentation preparations on Thursday of 4th week.

Appendix E: Future Jobs Internship Manual

Future Jobs Intern Recruitment Manual

Author: Andrea Frederick, Internship Coordinator

 www.ohiofuturejobs.org

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Background

The Future Jobs Internship Program will place Ohio in the forefront of internship and cooperative education experiences for young professionals in disciplines ranging from health information to high throughput computing. Combined with the disciplines of sensors and image processing, these four sectors integrate to provide the basis for a rewarding and well-paying professional career. Originally formed to meet the impending demands for skilled workers to work with Wright-Patterson AFB in Dayton, the consortium has already proven the value of industry-academic partnerships for focused curricular development.

The Future Jobs Internship Program will deliver 25 internship and cooperative education experiences over the 2009-2010 academic year. With these employer opportunities, Ohio's future professionals gain valuable professional experience in sectors of interest regionally, statewide, and nationally. The program uses strong employer and institutional support to extend a modest long-term state investment of less than $4000 per student experience to deliver a world class opportunity for students. Prepared and supported through the experience, the institution and employer involvement in all facets of the student experience from education to employment, is a proven Future Jobs formula for success.

Process

1.) When an employer decides they have a need for an intern they should complete the Future Jobs Intern Recruitment form and attach a job description. Completed forms should be sent to the Intern Coordinator. The Internship Coordinator will request for approval of the position from the Executive Director.
2.) Once the internship position has been approved, the Intern Coordinator will contact the career services centers at each Future Jobs educational partner institution to notify them of the available position. The position will then be posted on the respected university career sites and on the Future Jobs website to market the open position.
3.) Candidates that meet the qualifications specified by the employer on the Future Jobs Intern Recruitment form will be screened by the Intern Coordinator via telephone to determine if they are a good fit for the employer needs.
4.) Candidates that are a good match for the employer needs will be passed along to the respective HR employer contact to begin the company's interview process.
5.) Once the employer has selected the candidate in which they wish to hire, they will complete the Future Jobs Intern Request form and attach the candidate's resume. Completed forms need to be sent to the Internship Coordinator.
6.) Once the request has been made, the student will be offered an employment contract with Future Jobs by the Internship Coordinator. The contract will contain the details of the offer (hourly rate, number of hours, start and end dates) as well as the terms and conditions of the Future Jobs Internship Program. The student must sign the offer letter and return it to the Internship Coordinator to confirm their acceptance.
7.) Once the forms and offer letter have been received, the Internship Coordinator will correspond with the Future Jobs appointed contact at the candidate's educational institution to begin the process of hiring the candidate as a student employee.
8.) The educational institution will work with the Internship Coordinator to complete the Project Description Forms to solidify the internship. Completed forms need to be sent to the Internship Coordinator.
9.) Upon completion of the internship, the Internship Coordinator will distribute the Future Jobs Intern and Employer Evaluation forms to the intern and supervisor to determine the outcome and experience of the internship.
10.) The educational institution will work with the Internship Coordinator to complete the Invoice Form once the internship is complete to submit for reimbursement (up to $4000). Completed forms need to be sent to the Internship Coordinator.

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Future Jobs
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FUTURE JOBS INTERN RECRUITMENT FORM

1.) What are the requirements for the position? (E.g. status in school, minimum GPA, specific number of hours worked per week, security clearance, etc.)

2.) What skill sets are you looking for? (E.g. particular classes, technical languages, prior work experience)

3.) What is the length of the internship? (Must be a minimum of 10-12 weeks)

4.) What is the hourly rate the intern will be paid? (Future Jobs will provide up to $4000 per intern. Anything beyond $4000 is the employer's responsibility)

5.) Please describe your company's culture and what you are looking for in an intern candidate.

Return completed form with a job description and your contact information to:
Future Jobs
Andrea Frederick, Internship Coordinator
Ward Street at North Wittenberg Avenue
PO Box 6100
Springfield, OH 45501
afrederick@ohiofuturejobs.org
Ph: (937) 327-7867

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FUTURE JOBS INTERN REQUEST FORM

Supervisor name and contact information:

Last name (intern):

First name (intern):

College/University:

Major/Minor:

Current GPA:

Current Status (year in school):

Ethnicity (response is optional):

Job title of internship:

Start date of internship:

Hours intern will work per week:

Will the student receive credit for the internship at their institution?

Is the student an Ohio resident?

Does the intern have previous involvement in Future Jobs programs and activities? (If yes, please specify the program or activity)

Return completed form to:
Future Jobs
Andrea Frederick, Internship Coordinator
Ward Street at North Wittenberg Avenue
PO Box 6100
Springfield, OH 45501
afrederick@ohiofuturejobs.org
Ph: (937) 327-7867

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FUTURE JOBS INTERNSHIP CONTRACT

Month Day, Year

Intern Name
Intern Street Address
Intern City, State, Zip Code

Dear Intern Name,

On behalf of the Future Jobs Internship Program, we are pleased to offer you an internship position working with ABC Company as an ABC Title Intern. The internship period is expected to begin on ABC Date and end no later than August 31, 2010 depending upon your availability and work schedule. You will receive $ABC per hour and will be able to work a total of ABC hours for this internship period. Any hours worked beyond ABC hours will be unpaid by the Future Jobs Internship Program. The Future Jobs Internship Program obligates a maximum salary of $4,000 to each academic institution per intern during the course of their internship assignment. You will log your hours using your academic institution's time keeping system and will be paid by your academic institution on behalf of Future Jobs. All terms and conditions of your academic institution's time keeping system must be upheld by you throughout your internship period. Any hours worked in violation of your academic institution's policies will be unpaid by Future Jobs.

Any exceptions or changes to the terms of this contract must be presented in writing as an addendum and signed by you and the Future Jobs Internship Coordinator prior to the changes going into effect.

We look forward to your acceptance of this offer and joining the Future Jobs Internship Program.

Sincerely,

Andrea J. Frederick
Internship Coordinator, Future Jobs

I _____ agree to the terms and conditions of the Future Jobs Internship Program. I understand I will be paid a up to a maximum of $4,000 over the course of my internship, and any hours worked beyond the terms and conditions of this contract will be unpaid by Future Jobs.

_____ _____
Future Jobs Intern Signature Date

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INTERN EVALUATION FORM

Name: _____	Company: _____
School/University: _____	Supervisor: _____
Major: _____	Your job title: _____
Signature: _____	Date internship started: _____ ended: _____

Please rate your internship experience overall by circling the appropriate number.

Opportunity for learning
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Development of my professional skills
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Development of my technical skills
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Gained knowledge in my field of interest
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Please respond to the following based on your overall internship experience.

Were you able to apply prior or current coursework to the nature of your internship?

Did you feel supported and mentored by the company?

Would you be interested in full time employment with this company when you graduate?

How would you rate your overall internship experience?

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Future Jobs
ADVANCING OHIO

SUPERVISOR EVALUATION FORM

Student name: _____	Company: _____
School/University _____	Your name: _____
Date internship started: _____ ended: _____	Your job title: _____
Was this evaluation shared with the student: Yes No	Your Signature: _____

Please rate your overall experience by circling the appropriate number.

Intern showed initiative
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Intern showed development of their professional skills
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Intern sharpened their technical skills
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Intern showed problem solving/decision making skills
1= Poor 2= Fair 3= Good 4= Very Good 5= Excellent

Please respond to the following based on your overall internship experience.

Please comment on the Intern's areas of strength and any areas that need improvement.

Did the intern produce high-quality work?

Would you recommend full time employment for this intern when they graduate?

How would you rate your overall experience working with this intern?

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CLARK STATE
President's Office
570 East Leffel Lane
Post Office Box 570
Springfield, OH 45501
937-328-6002
937-328-6142 fax

Directions for Obtaining Reimbursement – Future Jobs Internships

1. The Internship Coordinator will work with the academic institution to complete the Project Description Sheet.
   - Include a complete project description and an itemized budget for the project, including the intern's salary
   - Attach the intern's resume, job description, the Future Jobs Intern Recruitment Form, and the Future Jobs Intern Request Form

This sheet should be signed by the academic institution, as well as by the Future Jobs Executive Director. Completed forms need to be sent to the Internship Coordinator. The Internship Coordinator will send the completed forms to the President's Office at Clark State and file the paperwork in the intern's file.

2. The Internship Coordinator will work with the academic institution to complete the Invoice Form.
   - Update the Header with the institution's information
   - Fill in the dates for the time period to be reimbursed
   - Fill in the budget column -this should match the budget on the project description sheet
   - Fill in the actual expenses for the reimbursement period in the second column
   - Fill in the total expenses for the project in the third column - this would be the sum of the Actual Column for all invoices submitted
   - The final Balance column will be calculated by the spread sheet
   - Sign and attach appropriate documentation of all expenses to the invoice. This would include payroll records, etc.

This sheet should be signed by the academic institution, as well as by the Future Jobs Executive Director. Completed forms need to be sent to the Internship Coordinator. The Internship Coordinator will send the completed forms to the President's Office at Clark State and file the paperwork in the intern's file.

Payment is made on the reimbursement basis.

 www.ohiofuturejobs.org

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Institution Name **Date**

PROJECT DESCRIPTION

Item	Detailed Budget Description	Amount
1		
2		
3		
4		
		$ -

I hereby certify that the above project information is accurate and meets the contract requirements between Clark State Community College and [replace with the name of your institution].

_____ _____

Project Manager Date

I hereby certify that I have reviewed and approved the above project information.

_____ _____

Future Jobs Executive Director Date

Proprietary of Future Jobs, v 1.3 www.ohiofuturejobs.org

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State University
c/o
123 Main Street
Anytown, OH 4XXXX
(XXX) XXX-XXXX

INVOICE

Future Jobs Initiative

INVOICE NUMBER: _____

Dates of Reimbursement: _____

				Budget	Actual	Total Project Expenses to Date	Balance
Program/Operating Expenses:							
	Internship Salary for (insert name)			$0.00	$0.00	$0.00	$0.00
	Other			$0.00	$0.00	$0.00	$0.00
TOTAL PROGRAM/OPERATING EXPENSES:				$0.00	$0.00	$0.00	$0.00
AMOUNT DUE:					$0.00		

I hereby certify that expenses in the request for reimbursement have been expensed in accordance with the contract.

_____
Authorized Signature Date

_____
Future Jobs Executive Director Date

Appendix F : Future Jobs Internship Position Descriptions

Product Development Intern

Company Profile

Accelerated Data Concepts, LLC is an innovative company built to leverage reconfigurable computing technologies into traditional computing solutions seamlessly. Our mission at Accelerated Data Concepts is to take re-configurable computing from the research lab and apply it as a solution to main stream applications. We offer affordable solutions to enhance software performance by plugging in hardware acceleration to your applications. We can improve your application's performance "hot spots" with parallelization techniques running through customizable FPGA processors. Target applications seeing the biggest boost in performance are those with complex computational processing. Accelerated Data Concepts was founded in 2005 to commercialize the work started by the co-founders in their reconfigurable computing research at Franklin University, Columbus, OH. Their success at demonstrating the integration of FPGA acceleration to database technologies has spawn industry interest.

Click here to visit Accelerated Data Concept's Website: http://www.acceleratedata.com/

Description

Candidate will work closely with ADC technical staff to help bring a data processing product to market.

Skills:

- C Programming experience, writing and debugging code - fluent with C/C++ compilers - Use of software development tools for debugging PC-based applications in a Windows environment
- Algorithm development
- Windows API Programming experience
- Microsoft Visual C and Visual Basic
- Excel / spreadsheet analysis
- Ability to work independently with minimal supervision
- Documentation of implemented design and test validations
- Parallel Algorithm development and optimization
- Understanding of SW/HW interfaces, as well as HW architecture
- Knowledge of VBA scripting language
- Experience in debugging hardware
- Experienced with software source control
- Experience with interactions with third party vendors, contractors, and customers
- Functional testing of firmware implementations
- Knowledge of VHDL or Verilog is not needed but would be beneficial

Research and Development Intern

Company Profile

Accelerated Data Concepts, LLC is an innovative company built to leverage reconfigurable computing technologies into traditional computing solutions seamlessly. Our mission at Accelerated Data Concepts is to take re-configurable computing from the research lab and apply it as a solution to main stream applications. We offer affordable solutions to enhance software performance by plugging in hardware acceleration to your applications. We can improve your application's performance "hot spots" with parallelization techniques running through customizable FPGA processors. Target applications seeing the biggest boost in performance are those with complex computational processing. Accelerated Data Concepts was founded in 2005 to commercialize the work started by the co-founders in their reconfigurable computing research at Franklin University, Columbus, OH. Their success at demonstrating the integration of FPGA acceleration to database technologies has spawn industry interest.

Click here to visit Accelerated Data Concept's Website: http://www.acceleratedata.com/

Description

Candidate will work closely with ADC technical staff to research imaging and compression algorithms for implementation into parallel computing systems.

Skills:

- C Programming experience, writing and debugging code - fluent with C/C++ compilers - Use of software development tools for debugging PC-based applications in a Windows environment
- Algorithm development and optimization
- Ability to work independently with minimal supervision
- Documentation, testing and validation of code
- Knowledge of digital image processing algorithms - Image compression standards (ie. JPEG, MPEG, H.264)
- Benchmarking and integration testing
- Knowledge of parallel computing
- Understanding of SW/HW interfaces, as well as HW architecture
- Experience in debugging hardware
- Experienced with software source control
- Knowledge of VHDL or Verilog is not needed but would be beneficial

MATH INTERN

Company Profile

Avetec (the Advanced Virtual Engine Test Cell, Inc.) is a small non-profit organization located in Springfield, Ohio providing research and innovation in modern aerospace engineering and commercial aviation. Avetec specializes in modeling and simulation research, data intensive computing, and STEM education initiatives with local schools and universities.

Click here to visit Avetec's website: www.avetec.org

Description

The Math Intern will support Avetec's research and visualization efforts by assisting with solid modeling and other visualization projects. The Math Intern will also assist with other company efforts such as Palantir as assigned and work effectively as a team member and individual contributor with minimal supervision.

- Learn and gain competency in appropriate software such as Solid Works, Mat-Lab, Palantir, and others
- Assist with modeling projects as assigned by the research and engineering team
- Work collaboratively with Avetec staff and others on the Palantir project and other projects
- Perform administrative and other related duties as needed

Skills:

- Outstanding interpersonal skills with a high degree of flexibility and energy
- Excellent computer and office skills
- Ability to research and find needed information
- Ability to quickly learn new skills and master information and software

Requirements:

Prefer a student with at least two quarters of college work in engineering, math, or related study

Prefer concentration or strong background and interest in visualization, simulation and modeling for engineering applications

Learn and gain competency in appropriate software such as Solid Works, Mat-Lab, and Palantir

PALANTIR NETWORKING AND SOFTWARE UTILIZATION INTERN

Company Profile

Avetec (the Advanced Virtual Engine Test Cell, Inc.) is a small non-profit organization located in Springfield, Ohio providing research and innovation in modern aerospace engineering and commercial aviation. Avetec specializes in modeling and simulation research, data intensive computing, and STEM education initiatives with local schools and universities.

Click here to visit Avetec's website: www.avetec.org

Description

Support Avetec's intelligence and cybersecurity efforts by assisting with Palantir software installation, training and utilization and related projects. Also assist with other company efforts such as Palantir as assigned. Work effectively as a team member and individual contributor with minimal supervision.

- Learn and gain competency in appropriate software such as Solid Works, Matt-Lab, Palantir, and others
- Assist with Palentir and related projects as assigned
- Work collaboratively with Avetec staff, NASIC, and others on the Palantir project and other projects
- Perform administrative and other related duties as needed

Skills

- Outstanding interpersonal skills with a high degree of flexibility and energy
- Excellent computer and office skills
- Ability to research and find needed information
- Ability to quickly learn new skills and master information and software

Requirements

Prefer a student with at least two quarters of college work in engineering, cybersecurity, computer software, or related study

Prefer concentration or strong background and interest in visualization, simulation and modeling for engineering applications

Learn and gain competency in appropriate software such as Solid Works, Mat-Lab, and Palantir

STEM EDUCATION INTERN

Company Profile:

Avetec (the Advanced Virtual Engine Test Cell, Inc.) is a small non-profit organization located in Springfield, Ohio providing research and innovation in modern aerospace engineering and commercial aviation. Avetec specializes in modeling and simulation research, data intensive computing, and STEM education initiatives with local schools and universities.

Click here to visit Avetec's website: www.avetec.org

Description

Support Avetec's STEM education efforts by assisting with entrepreneurship ventures, website updates and education activities to assist in STEM education. Also assist with all other STEM education and company efforts as assigned. Work effectively as a team member and individual contributor with minimal supervision.

- Post, edit and maintain STEM educational materials on the website
- Work with Avetec staff on marketing and entrepreneurship of STEM projects
- Work collaboratively with Avetec staff on the STARS STEM education project and other STEM projects
- Assists with administrative duties as needed
- Performs other related duties

Skills

- Outstanding interpersonal skills with a high degree of flexibility and energy
- Excellent computer and office skills, using standard Microsoft programs
- Ability to research and find needed information
- Ability to quickly learn new skills and master information

Requirements

Prefer a student with at least two semesters of college work in a STEM field or in a general education field with an interest in STEM

Prefer past experience with web sites and design

CACI
EVER VIGILANT

TECHNICAL AND SCIENTIFIC INTERN

Company Profile

CACI International Inc provides the professional services and IT solutions needed to prevail in today's defense, intelligence, homeland security and federal civilian government arenas. This internship will support Geospatial Technologies Solutions Division. Our personnel have first hand expertise in the use of spectrometry, radiometry, and polarimetry to characterize natural and man made materials, and the atmosphere, with the ultimate goal of identifying exploitable intelligence signatures and validating the performance of remote sensors and intelligence exploitation software tools. CACI's capabilities support America's development of new intelligence gathering and exploitation capabilities. As a leader in providing timely solutions to the Intelligence Community, CACI brings broad experience and deep expertise to the full range of intelligence missions. CACI's highly skilled professionals are equipped with the tradecraft, technology and values needed to support America's security.

Click here to visit CACI's website: www.caci.com

Description:

This position will assist in researching measurement techniques and COTS instrumentation which could be developed into cutting edge technology collection systems capable of fulfilling existing FBI needs in grave forensics, covert marking and tracking of suspect vehicles and penetration of heavy tinted windows to view activity. Activity could include supporting the integration and testing of visible and shortwave infrared spectrometers and an FTIR field spectrometer. Work will also involve the Investigation of COTS hardware and software products for utilization into prototype systems.

Skills

- Basic computer knowledge-MS Office
- Strong technical writing skills
- Analytic ability-research, compile, and analyze data
- Understanding of spectrometry and radiometry a plus

Requirements

Major: scientific/technical background, research capabilities, understanding of spectrometry and radiometry a plus, programming ability for development of spectrometer user interfaces and automation of data processing is a plus.

GPA: minimum 3.0 (cumulative)

School year: junior or senior

U.S. Citizenship

CACI
EVER VIGILANT

Technical Research Intern

Company Profile

CACI is a large international company providing professional services and IT solutions needed to prevail in the defense, intelligence, homeland security, and federal civilian government arenas. CACI specializes in enterprise IT and network services, cyber solutions, integrated security, and intelligence solutions. CACI is a member of the Fortune 1000 Largest Companies and the Russell 2000 index. CACI provides dynamic careers for approximately 12,800 employees working in over 120 offices in the U.S. and Europe.

Click here to visit CACI's website www.caci.com

Description

This position will assist in researching and developing intelligence coursework and programs of study, training opportunities within the intelligence community, proposal and technical writing and some administrative support. This position will also assist in researching FBI opportunities and capabilities and support to include cutting edge technology in grave forensics, automobile windows exploitations, integration of CACI Bomen spectrometer, testing SWIR spectral images both to include remote abilities, Unmanned Aerial Vehicle research, and commercial off-the-shelf software utilization and implementation.

Skills

- U.S. Citizenship
- Strong research skills
- Strong academic record
- Scientific/technical background, research capabilities, computer skills and knowledge

Requirements

School year: Junior or Senior

Majors: Law Enforcement, Homeland Security and Terrorism, Forensic Psychology, Government and National Security, and Cyber Security

jjrsolutions
We deliver. You succeed.

Technical Internship

Company Profile

JJR Solutions is a Service Disabled Veteran Owned Small Business (SDVOSB) focused on delivering solutions, products and services to local, state and federal government organizations. The firm is strongly connected to the information technology (IT) domain with a particular focus on data. In some cases we will deliver IT based solutions, products and services in the form of software or advanced sensor technology. In other cases, IT will be used as an enabler to deliver services where the final product might be transformed data, improved business processes or information discovery through new or improved sensing mechanisms.

Click here to visit JJR Solution's website: www.jjrsolutions.com

Description

- Compile a systems engineering process library for use in seeking Capability Maturity Model and Integration (CMMI) certification.
- Activities will include working with JJR Solutions employees and subcontractors to identify and diagram work flow processes for product definition, design, development, testing, and delivery for Master Data Management, Enterprise Architecture, and Web Services projects.
- Compare these processes to commercially available application development frameworks like Microsoft Visual Studio .Net, Oracle's Application Express, IBM's WebSphere product line, and Open Source tools.
- Create document forms and templates that support the rapid application of these processes to new work activities in a JJR Process Library available on the corporate SharePoint server.

Skills

- Technologies: Java, C#, C++, XML, XSL, SOAP, WSDL, SQL, .Net, HTML, Javascript, Linux, Windows (Server 2003, 2007), Solaris, Eclipse, Informatica, Business Objects, Apache, Tomcat, Oracle RDBMS, SQL Server, Teradata(BTEQ), JDeveloper, MS Office, Visio
- Techniques: Process Modelling and Simulation, SMP (Symmetric Multi-Processing), Database Design, Database Optimization, Open Source Development, Hardware and/or Software Testing, GIS, Web Service Development, XML Stylesheets and Transformations, Web Based Design and Development, System Architecture

Requirements

School Year: Junior, Senior, Graduate

Major: Management Information Systems

GPA: A minimum 3.0 (cumulative)

jjrsolutions
We deliver. You succeed.

Technical Internship

Company Profile

JJR Solutions is a Service Disabled Veteran Owned Small Business (SDVOSB) focused on delivering solutions, products and services to local, state and federal government organizations. The firm is strongly connected to the information technology (IT) domain with a particular focus on data. In some cases we will deliver IT based solutions, products and services in the form of software or advanced sensor technology. In other cases, IT will be used as an enabler to deliver services where the final product might be transformed data, improved business processes or information discovery through new or improved sensing mechanisms.

Click here to visit JJR Solution's website: www.jjrsolutions.com

Description

This position will have three focus areas:

- Computer Science/MIS/Computer Engineering: Support client engagements involving data analysis, quality measurements and reporting, cleansing, web service development, requirements definition, software system architecture documentation, high-throughput data processing, performance optimization, system testing, and product development.
- English (Technical Writing): Support evolution of JJR Solutions' Process Library to include corporate policies and procedures, CMMI-compliant development methodology process documentation, requirements collection and management, test case and result documentation, editing and proofreading for quality product deliverables including technical and non-technical documentation.
- Art (Graphics Design): Enhance the JJR Solutions product quality by providing innovative and professional graphic design to technical work products generated by the engineering teams. Build a graphics library in Microsoft Visio and/or MS PowerPoint that can be used for presentation templates, user interface design wireframe development, and other customer facing products.

Skills

- Technologies: Java, C#, C++, XML, XSL, SOAP, WSDL, SQL, .Net, HTML, Javascript, Linux, Windows (Server 2003, 2007), Solaris, Eclipse, Informatica, Business Objects, Apache, Tomcat, Oracle RDBMS, SQL Server, Teradata(BTEQ), JDeveloper, MS Office, Visio
- Techniques: Process Modelling and Simulation, SMP (Symmetric Multi-Processing), Database Design, Database Optimization, Open Source Development, Hardware and/or Software Testing, GIS, Web Service Development, XML Stylesheets and Transformations, Web Based Design and Development, System Architecture

Requirements

School Year: Junior, Senior, Graduate

Reed Elsevier

Associate Infrastructure Engineer Intern

Company Profile

Lexis Nexis - Reed Elsevier is a world leading provider of professional information and online workflow solutions in the Science, Medical, Legal, Risk Information and Analystics, and Business Sectors. LexisNexis originally pioneered online information with its Lexis and Nexis services. A member of Reed Elsevier, LexisNexis serves customers in more than 100 countries with more than 15,000 employees worldwide. Through the integration of information and technology, LexisNexis uniquely unites proprietary brands, advanced Web technologies and premium information sources. Across the globe, LexisNexis provides customers with access to billions of searchable documents and records from more than 45,000 legal, news and business sources.

Click here to visit Lexis Nexis' website: www.lexisnexis.com

Description

The position of Associate Infrastructure Engineer Intern is an entry level position that exists to receive data center equipment, install it in racks, document infrastructure, inventory equipment, install operating systems, and assist in datacenter activities.

- Receive datacenter equipment
- Install equipment in racks
- Install and configure Windows operating systems
- Document rack locations and server configuration
- Document network port usage
- Assist team members in diagnosing issues

Skills

- Ability to work independently and in a team setting
- Ability to follow directions
- Strong communication skills
- Technical systems; process and procedure documentation
- Strong attention to detail
- Microsoft server Operating Systems
- Microsoft SQL server
- SAP Crystal Reports

Requirements

School year: Junior or Senior

GPA: Minimum of 3.0 (cumulative)

Major: Computer Science, Computer Engineering, MIS, Computer Information Systems

Technical Intern

Company Profile

OpenFPGA Inc. is a non-profit organization working to enable standards in an exciting area of reconfigurable computing. The organization, started in Springfield and presently based in Dayton provides services to the global reconfigurable computing community in terms of educational resources, collaboration and community development efforts. Members of the OpenFPGA board are from such organizations as General Electric, Oak Ridge National Laboratory, the Ohio Supercomputer Center, SRC Computers, the National Center for Supercomputer Applications (NCSA), the Zuse Institute Berlin, Wittenberg University as well as individual entrepreneurs.

Click here to view OpenFPGA's website: www.openfpga.com

Description

OpenFPGA Inc. is currently seeking a motivated individual to work with the OpenFPGA board and membership to extend the core services offered through the organization. The individual will have the opportunity to work on projects with international visibility in areas of benchmarking, education and standards development. The ideal candidate will have interests in high-performance, parallel or reconfigurable computing, abilities to work with PHP/MySQL for website development, and a desire to explore interesting application areas for reconfigurable computing in both mobile and stationary platforms. Candidates should be well organized with an attention to detail.

Skills

- Good written communication skills
- Programming experience including at least intro to programming and computer data structures
- Candidate must also have one of the following two combinations of skills and interests:
  1) Web programming with PHP and MySQL with an interest to learn about applications in reconfigurable computing and about VHDL
  2) VHDL and experience with FPGA applications with an interest to learn PHP and MySQL web programming

Requirements

School year: sophomore, junior, or senior

Majors: Computer Engineering, Computer Science, Computer Information Systems, MIS

GPA: Minimum 3.0 (cumulative)

Qbase®

GOVERNMENT SOLUTIONS INTERN

Company Profile:

Qbase is a small, private data and analytics company with offices in Washington D.C., Dayton, and Springfield, Ohio. Qbase delivers leading solutions in data management, analytics and visualization, high throughput computing technologies, and a full spectrum of information technology services. Qbase's IT services support client mission-critical requirements in government, military, healthcare and commercial markets.

Click here to view Qbase's website: www.qbase.us

Description:

This position supports the Qbase Government team in efforts to sell Qbase services and solutions. Responsibilities include a wide variety of tasks including market research, evaluating findings, assisting with contract development and program management activities.

- Researches Input/Herbb/Meed databases for data opportunities
- Collect, record, analyze and evaluate validity of findings
- Prepares reports of findings and delivers presentation to supervisors
- Creates client prospect lists for various territories and stack ranks prospects
- Represents Qbase at professional organizational meetings, conferences, and conventions with the Sales Team
- Works with the Marketing Communications Department to create collateral packages for client visits
- Effectively uses sales database and CRM tools to track contact and sales activity and pipeline management
- Product demonstrations with the Account Executives
- Assist with contract development and program management activities

Skills:

- Self-starter
- Strong communication and verbal skills
- Negotiation and exceptional listening skills
- Experience with Microsoft Office
- Be willing to work independently and as a team

Requirements:

Status: Preferred candidate will be in the start of their senior year, or enrolled in a Graduate or PhD program; sophomores of two year colleges will be considered.

GPA: Minimum cumulative GPA of 3.0

Major: All majors are accepted, Business majors preferred.

Qbase®

SOFTWARE ENGINEER INTERN

Company Profile

Qbase is a small, private data and analytics company with offices in Washington D.C., Dayton, and Springfield, Ohio. Qbase delivers leading solutions in data management, analytics and visualization, high throughput computing technologies, and a full spectrum of information technology services. Qbase's IT services support client mission-critical requirements in government, military, healthcare and commercial markets.

Click here to view Qbase's website: www.qbase.us

Description

The Software Engineer Intern provides support for software engineering solutions for Qbase initiatives and provides practical applications in software design and engineering as Qbase develops solutions unique to our value proposition. The Software Engineer Intern will undertake challenges in aggregating multiple, diverse datasets

- Be active in brainstorming solutions as well as in the design and coding of those solutions
- Participate in a variety of customer interactions
- Work with raw data
- Use various analytical tools while producing useful work product
- Assist in creating and deploying software solutions

Skills

- Must be a team player with strong collaboration skills
- Course work completed in Microsoft Development environment and tools
- Exposure to multi-tiered system architecture and development preferred
- Course work completed in one or more of the following: C++, C#, ASP.Net, Relational Database (Oracle, MSSQL, MySQL), Visual Studio, .NET coding skills, XML, Operating Systems (Windows 200X/NT)

Requirements

Status: Preferred candidate will be in the start of their senior year, or enrolled in a Graduate or PhD program with a minimum GPA of 3.0. Sophomores of two year colleges will be considered.

Residency: All residencies accepted. Ohio state residents preferred.

Major: All majors are accepted. Computer Science, Software Engineering, Information Systems, MIS

Availability: Student must be available at a minimum of 15 hours a week; minimum of 5 hour block per work day.

Qbase®

SUPPORT DESK ANALYST INTERN

Company Profile

Qbase is a small, private data and analytics company with offices in Washington D.C., Dayton, and Springfield, Ohio. Qbase delivers leading solutions in data management, analytics and visualization, high throughput computing technologies, and a full spectrum of information technology services. Qbase's IT services support client mission-critical requirements in government, military, healthcare and commercial markets.

Click here to view Qbase's website: www.qbase.us

Description

This internship is part of the IT team which provides support for the company and its customers. In addition to resolving user issues, the Support Desk Analyst Intern will aid in deploying and upgrading workstations, as well as monitoring datacenter environmental and security controls. The Support Desk Analyst Intern must possess the ability to communicate well in person, through email, and by phone. Excellent customer service skills are essential in this position. This position reports directly to the Director of IT Support Operations.

- Under direction from the Qbase Network Engineer team, analyze business needs and designs, install and support network solutions on one or multiple platforms in a LAN, WAN, MAN or wireless architecture
- Monitor intranet, extranet, and internet systems for security threats
- Troubleshoot network usage and peripheral issues, resolve connectivity issues and maintain data and telecommunication connections

Skills

- Strong internal and external customer service focus
- Familiar with troubleshooting skills
- Preferred candidate will have college coursework of LAN/WAN/MAN hardware and software systems and varied products such as Cisco, Nortel, and various firewall solutions

Requirements

Status: Preferred candidate will be in the start of their senior year, or enrolled in a Graduate or PhD program with a minimum GPA of 3.0. Sophomores of two year colleges will be considered.

Residency: All residencies accepted. Ohio state residents preferred.

Major: All majors are accepted. Computer Science, Software Engineering, Information Systems, MIS

Availability: Student must be available at a minimum of 15 hours a week; minimum of 5 hour block per work day.

BIOCHEMISTRY/CHEMISTRY INTERNSHIP MOLECULAR BIOLOGY

Company Profile

Founded in 1973, UES is a medium-sized employer located in Dayton, Ohio with over 37 years of experience in science and technology. UES has a reputation for providing superior, world-class, on-site scientific, technical, and research support to government agencies and industry partners. UES specializes in investing in-house laboratories where they transition scientific innovations into commercially available products and services. UES, as a government contractor, has developed a cost accounting system that complies with Defense Contract Audit Agency (DCAA) regulations and Cost Accounting Standards Board (CASB).UES has been serving the same clients such at the AFRL, AFOSR, and USAARL for over 20 years.

Click here to visit UES' website www.ues.com

Description

The growing pharmaceutical and biotechnology industries are becoming an ever-more competitive post-graduation job environment. A position exists at UES, Inc. for an undergraduate sophomore or junior student to acquire the background skills and knowledge vital for success in these fields, while at the same time actively contributing to research at the forefront of technology. The intern will develop experience in molecular biological techniques such as PCR, gene cloning, combinatorial library creation, gel electrophoresis and statistical analysis.
with lab.

Skills

- Must have completed first year core in biology/chemistry,
- Hands-on lab experience would be beneficial

Requirements

School year: sophomore, junior, senior

GPA: 3.0 minimum (cumulative)

Majors: Biology, Chemistry, Biochemistry

U.S. Citizenship

Biology & Biochemistry Internship (Cell Culture)

Company Profile

Founded in 1973, UES is a medium-sized employer located in Dayton, Ohio with over 37 years of experience in science and technology. UES has a reputation for providing superior, world-class, on-site scientific, technical, and research support to government agencies and industry partners. UES specializes in investing in-house laboratories where they transition scientific innovations into commercially available products and services. UES, as a government contractor, has developed a cost accounting system that complies with Defense Contract Audit Agency (DCAA) regulations and Cost Accounting Standards Board (CASB).UES has been serving the same clients such at the AFRL, AFOSR, and USAARL for over 20 years.

Click here to visit UES' website www.ues.com

Description

Different cells require different media and conditions to grow depending upon the application. At UES, we have the capabilities of growing both prokaryotic and eukaryotic cells for use in a myriad of applications (i.e. protein expression, virus production, cloning, toxicology testing). The student position will obtain skills involved in the growth of simple and more complex cells including sterile techniques, media preparation, growth conditions, and use of supplements. Course requirements include one year of biology with lab.

Skills

- Must have completed first year core in biology/chemistry,
- Hands-on lab experience would be beneficial

Requirements

School year: sophomore, junior, senior

GPA: 3.0 minimum (cumulative)

Majors: Biology, Chemistry, Biochemistry

U.S. Citizenship

Wright Brothers Institute

Marketing Intern

Company Profile

Located in Dayton, Ohio with its rich heritage of innovation and invention, Wright Brothers Institute (WBI) seeks to continue this heritage by stimulating unique and innovative technical solutions to national security and public safety needs. Working in partnership with its foundational stakeholder, the Air Force Research Laboratory, WBI operates as a neutral enabler and place for multidisciplinary joint (government, industry, and academia) teams to come together in intense collaborations focusing on complex problems or challenges. The outcome of these collaborations can range from a better and more complete understanding of a problem to the rapid development of actual prototypes. WBI leverages this work for its other foundational stakeholder, the Dayton Region, to stimulate and support the growth of technology companies, to foster technology transition and transfer to commercial endeavors, and to enhance science and math educational opportunities.

Click here to visit the Wright Brothers Institute's website http://wbi-icc.com

Description

Wright Brothers Institute will be hosting up to ten teams composed primarily of college science and engineering students. These teams will be tackling technical problems identified by the Air Force Research Laboratory. The role of this internship is twofold. First, provide a non-engineering perspective to the problem solving activities of these teams. Alternate perspectives are essential to innovation. The second key role is to develop innovative ways of describing the products of these teams from a commercial marketing perspective. The intern would be encouraged to think beyond the application the teams are working on, to other ways the products could be sold in the marketplace. The final product would be an overall marketing pitch, given to WBI management and selected other officials on a product of choice by the intern.

Duties Include:

- Actively participate on the technical teams
- Develop creative ways of describing complex technology ideas.
- Develop and present marketing ideas to senior management within WBI and AFRL

Skills

- Comfortable with technology, although there is no specific technical proficiency required
- Must have a background and coursework in Marketing and Business

Requirements

School year: sophomore, junior, or senior

Majors: Marketing, Communication, Business

Future Jobs
ADVANCING OHIO

WEBSITE SUPPORT INTERN

Company Profile

Future Jobs is a consortium of regional academic institutions and employers, formed in 2007, to promote the development of employer-driven career pathways in STEM fields essential to the future economic development of the Clark and Greene County Ohio area. The consortium includes school districts, community colleges, 4-year institutions and graduate schools providing a continuity of opportunity for professional career development. Future Jobs is committed to providing employer-driven programs that advance curricula that create sustainable, high paying technology driven jobs for Ohio.

Click here to visit the Future Jobs website: www.ohiofuturejobs.org

Description

The Website Support Intern will add and maintain content as well as develop new features for the Future Jobs website. This will involve using the site upload features to upload internship opportunities, job opportunities, program updates, and region publicity stories of interest. This position will work closely with the Future Jobs team, including the Executive Director, Intern Coordinator and Technical Director to set priorities. This position will also be responsible for working with contacts at Future Jobs academic institutions to obtain information for the website. The Future Jobs website is written in PHP and the position may also involve work with the Future Jobs partners to develop and deploy new features and functionalities to improve the utilization of the website.

Skills

This position requires strong communication skills for interaction with Future Jobs partners over the phone and occasionally in person. The Website Support Intern should have experience with the following software languages:

- PHP
- HTML
- MySQL
- Subversion

Requirements

School year: junior or senior

Availability: candidate must be available at a minimum of 12-15 hours per week

GPA: minimum 3.0 (cumulative)

Majors: all majors are accepted, Computer Science and MIS majors preferred

www.ohiofuturejobs.org

Information Technology Administration Internship

Company Profile

Zia Systems, LLC, a small technology business located at the NET Incubator in Springfield, is developing and commercializing a unique wireless sensor monitoring and real time location system (RTLS) to remotely locate, monitor and control a wide variety of assets (people and things) within private wireless networks. Zia's patent-pending technology integrates a wireless network, with "smart" tags, and a web based operating and reporting system that enables its customers to locate, monitor and control assets in real-time via the internet. Zia's system combines electronic asset tags with low power radios, and wireless, solar-powered reference nodes, which route the asset sensor information over a mesh network, and ultimately to an Internet-based software application for reporting and alerts.

Click here to visit Zia System's website www.ziasystems.com

Description

Zia Systems is a start-up company developing hardware and software technology to track and monitor the location and sensor information associated with assets. This position will assist in developing operating procedures associated with the installation and end-user interface of the system. The position will also assist in the handling of internal accounting responsibilities.

The Intern will work closely with the COO and CIO to perform several functions within the department, including, but not limited to:

- Assist in the Development of hardware and application software installation procedures manual
- Assist in the Development of application software Users manual
- Assist in the Development and Execution of internal inventory tracking system
- Administration of Company Blog
- Assist in Product testing

Skills

- Must be proficient in MS Office (Word, Excel, Access, PowerPoint)
- Requires a strong sense of responsibility and accountability
- Must be able to adapt and be flexible – ability to handle ambiguity and changing priorities
- Must maintain a professional and positive attitude
- Must be knowledgeable in Internet Social Networks
- Must possess strong communication skills

Appendix G: Future Jobs Participant Surveys

FUTURE JOBS I EDUCATIONAL INSTITUTION SURVEY

Briefly describe the individual(s) that are completing this survey including contact information:

Sidney Williams
1400 Brush Row Road
P.O. Box 1004
Wilberforce, OH 45384
937.376.6068
Swilliams2@centralstate.edu

1.) What has the long term value of Future Jobs been on your institution?

☐ **Detrimental** ☐ **No Value** ☐ **$5,000** ☐ **$10,000** ☒ **More than $10,000**

2.) The Future Jobs funded program(s) at your institution have helped to attract students into STEM majors. Please comment on your rating.

☐ **Strongly Disagree** ☐ **Disagree** ☐ **N/A** ☐ **Agree** ☒ **Strongly Agree**

Central State has matriculated professionals of national and international note since its inception in 1887 and has been consistently responsible for significant percentages of the total number of African-American students graduating from all Ohio public universities. Since 2002, Central State has awarded seven percent of all bachelors' degrees earned by African-Americans (regardless of major) at public universities in the State of Ohio. Other public universities that awarded notable percentages of bachelors' degrees to this population have significantly higher enrollment and include the Ohio State University (52,568 students currently enrolled) with 26%, the University of Cincinnati (29,319 enrolled) with 14%, and Kent State University (22,359 enrolled) with 9%. Central State awarded bachelor's degrees to African-Americans in the following programs as compared to the total African American graduates from other public universities in the State of Ohio with the same programs: Computer Science (17%); Industrial Technology (10%); Industrial/Manufacturing Engineering (16%); Mathematics (28%); Biology (5%) and Physical Sciences (8%). However, 95.8% of the students at Central State receive some form of financial aid and the vast majority of financial aid awarded is need-based, while a comparatively small amount is based upon merit for academic standing. Further, Central State is an open access institution and the university tends to attract lower-achieving students as evidenced by the following statistics of the fall 2007 incoming freshmen: an average high school GPA of 2.4 and an average ACT composite score of 15.9 or an average SAT cumulative score of

805.5. Thus, Future Jobs funding of two summer bridge programs to attract, assist, and retain incoming freshmen majoring in STEM disciplines was critical in that it provided the basic scholastic tools needed for success in their respective STEM program during their freshmen year of college. In 2008, the average high school GPA for freshmen participating in the Future Jobs Summer Bridge Program was 2.34 and the average ACT score was 16.25. After completed their freshmen year of college, the average GPA for the participants increased to 2.64. Notably, this included a student who entered with a 1.33 high school GPA and completed his freshmen year with a cumulative GPA of 2.8.

3.) The Future Jobs funded program(s) at your institution have helped to attract students into Healthcare Information and Imaging Processing Technology focus areas. Please comment on your rating.

☐ **Strongly Disagree** ☐ **Disagree** ☒ **N/A** ☐ **Agree** ☐ **Strongly Agree**

Central State does not have a degree offering in Healthcare Information and Imaging Processing Technology.

4.) Did the Future Jobs pilot project help prepare your students for professional experiences? Please comment on your rating.

☐ **Strongly Disagree** ☐ **Disagree** ☐ **N/A** ☐ **Agree** ☒ **Strongly Agree**

In addition to academic preparation, the Future Jobs Summer Bridge Program also included sessions on time management, communication skills, vocabulary development, and computer skills. Further, students were required to create and present a power-point presentation regarding their learning outcomes. The development of practical soft skills as stated is important in the total development of the student as a young professional and to enhance the professional experience.

5.) Has Future Jobs played a role in aiding your institution to create employer relevant curricula? Please comment on your rating.

☐ **Strongly Disagree** ☐ **Disagree** ☒ **N/A** ☐ **Agree** ☐ **Strongly Agree**

The Future Jobs Summer Bridge Program did not focus on the creation of curricula. As Future Jobs shifted its focus into internship development, information gathered from Future Jobs by way of employers was helpful as Central State reviewed its course offerings and material.

6.) Has Future Jobs played a role in bolstering faculty interest and support in STEM programs? Please comment on your rating.

☐ **Strongly Disagree** ☐ **Disagree** ☐ **N/A** ☐ **Agree** ☒ **Strongly Agree**

In addition to providing STEM faculty to teach in the Future Jobs Summer Bridge Program, the program also provided an English instructor for reading comprehension and writing skills and

tutors. The intersection of various instructors within the program allowed for the participants as well as the instructors to see the value of STEM education, its various occupational offerings, and their role in building a diverse group of future STEM employees in support of our state and national economies.

7.) Please list the number of students that have participated in your Future Jobs funded program(s) since its inception.

During its two terms, 30 incoming freshmen students were accepted into the Future Jobs STEM Summer Bridge Program and 26 successfully completed the program and enrolled at Central State University.

8.) Were the Future Jobs funded programs at your institution sustained following the Future Jobs pilot project? If no, please include feedback on why each program ended.

No, the Future Jobs STEM Summer Bridge Program did not continue because of lack of funding.

9.) Describe your overall experience with the Future Jobs I pilot project (E.g. what went well, where we can improve, etc.).

The program was extremely successful in assisting Central State students prepare for the academic rigors of college and their pursuit of a STEM degree. The forming of the Future Jobs "working group" enhanced communication between the participants and promoted unity despite each participating institution taking a different path to achieve its objectives. The leadership of Future Jobs was sound and allowed for creativity with a structured focus: STEM. Future Jobs, however, can improve through better marketing efforts to inform the public of its successes and STEM opportunities that exist locally and regionally.

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

Eric King

Reed Elsevier Technology Services (LexisNexis)

Manager, Global Hardware Services

Intern Supervisor

Eric.king@reedelsevier.com

937.247.1567

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

The interns interviewed very well and have been very professional in all their interactions and work.

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

The Future Jobs Internship Program did an excellent job of finding quality candidates that met are requirements.

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

We were not involved in creating a curriculum.

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

We have only been engaged with Future Jobs for a couple of months.

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.

2. Both have done an excellent job

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)
The candidates provided were excellent. Andrea did excellent job communicating and working with us. The overall process took a little longer than I hoped because Future Jobs had some difficulty finding candidates early in the process.

FUTURE JOBS I EDUCATIONAL INSTITUTION SURVEY

Briefly describe the individual(s) that are completing this survey including contact information:

My name is Dr. Adam Parker, Assistant Professor of Mathematics at Wittenberg University. I am one of the primary organizers for the Wittenberg Saturday Science Program, which was funded for 18 months from a grant from Future Jobs.

1.) What has the long term value of Future Jobs been on your institution?

Detrimental No Value $5,000 $10,000 More than $10,000

I am unsure of the monetary value at this point. Most of our students attending our programs are younger, and this year will be making college decisions. Perhaps admissions can answer if we've actually attracted any new students to Wittenberg because of this program.

2.) The Future Jobs funded program(s) at your institution have helped to attract students into STEM majors. Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

Please see above.

3.) The Future Jobs funded program(s) at your institution have helped to attract students into Healthcare Information and Imaging Processing Technology focus areas. Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

None of our sessions have concentrated on Healthcare Information or Image Processing Technology.

4.) Did the Future Jobs pilot project help prepare your students for professional experiences? Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

Our program is geared towards high school students. These students are years away from considering professional experiences. They do, however, give students a flavor of what is happening in various areas of STEM research.

5.) Has Future Jobs played a role in aiding your institution to create employer relevant curricula? Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

Again, I don't think that developing curricula is the goal of the Science Outreach program.

6.) Has Future Jobs played a role in bolstering faculty interest and support in STEM programs? Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

We have been able to offer talks from 8 different departments, giving faculty a means to interact with young students. The program has made STEM fields more visible to faculty from non-STEM departments as well.

7.) Please list the number of students that have participated in your Future Jobs funded program(s) since its inception.

Approximately 80 distinct students. Since many attend multiple sessions, we've had approximately 200 total attendees.

7.) Were the Future Jobs funded programs at your institution sustained following the Future Jobs pilot project? If no, please include feedback on why each program ended.

Yes. Wittenberg has agreed to fund the next 18 months of the program.

8.) Describe your overall experience with the Future Jobs I pilot project (E.g. what went well, where we can improve, etc.).

Extremely positive. The application process was reasonable and fast, enabling us to move quickly to develop the program. Overall, it has been a very large success, which would have been impossible without the Future Jobs grant.

FUTURE JOBS I EDUCATIONAL INSTITUTION SURVEY

Briefly describe the individual(s) that are completing this survey including contact information:

Eric Stahlberg – Computational Science Director and technical lead for Future Jobs

1.) What has the long term value of Future Jobs been on your institution?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

More than $10,000, through additional grants awarded that incorporated Future Jobs activities in the track record.

2.) The Future Jobs funded program(s) at your institution have helped to attract students into STEM majors. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Agree – the program has helped to interest more students in computational science.

3.) The Future Jobs funded program(s) at your institution have helped to attract students into Healthcare Information and Imaging Processing Technology focus areas. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Agree – The program has attracted one student in particular into working with Nationwide Children's Hospital working on database and other programming for two consecutive summers. Additional students are being attracted as a result of NSF scholarships and projects that are building on the Future jobs foundation.

4.) Did the Future Jobs pilot project help prepare your students for professional experiences? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree – This response is largely built on the quality of internship experiences that were supported by Future Jobs. In addition, the externships have provided faculty (Dr. Bogaerts in particular) with the experiences that he is readily incorporating into his classroom experiences.

5.) Has Future Jobs played a role in aiding your institution to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Agree – The course for data integration is one of the lasting elements from the program. In addition, the department is also reexamining the need to provide experience in application development experience with database technologies.

6.) Has Future Jobs played a role in bolstering faculty interest and support in STEM programs? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Agree – While faculty was already interested in STEM areas, the Future Jobs effort has strongly impacted their interest in deepening the real-world experiences as part of the undergraduate preparation.

7.) Please list the number of students that have participated in your Future Jobs funded program(s) since its inception.

On the order of 70-80 students among students, interns, Upward Bound participants and Saturday Science attendees.

8.) Were the Future Jobs funded programs at your institution sustained following the Future Jobs pilot project? If no, please include feedback on why each program ended.

- Upward Bound continues to move forward at the institution, although the specific STEM emphasis has waned. With the arrival of the NSF ACTIVATE scholars on campus this fall, the Upward Bound STEM emphasis will reappear with these scholars working with that program.
- Internship funding continues to be pursued through external funding opportunities.
- Curriculum development opportunities continue through externally funded opportunities.
- Saturday Science was funded by the institution for 2 years following the initial year supported through Future Jobs.
- The Geek House continues to develop websites with images and data capabilities.

9.) Describe your overall experience with the Future Jobs I pilot project (E.g. what went well, where we can improve, etc.).

The Future Jobs experience was very positive for Wittenberg University as a source of new funding to pilot several initiatives on campus. Due to limited funding, not all pilots were continued with sustaining internal funds.

What went well?

The externships and Upward Bound STEM emphasis went particularly well. The internship efforts we also done very well and critical to preparing several students for future careers in the target areas.

Curriculum develop in data integration would not have happened without Future Jobs support, yet has proven useful to the students who have taken it.

What can be improved?

An earlier process for making specific sub-awards with better tracking of outcomes and financial transfers among institutions would help. By the end of the pilot, several processes were established to make this more effective, but can still be improved.

Broader involvement among the campus communities would also be a benefit. Largely limited by the reduced size of the award, the ability to engage the necessary participants on campus (e.g. career development, additional faculty) to create overall campus enthusiasm was hindered.

A specific organization structure and description would have been useful earlier to promote and engage more stakeholders earlier.

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

Daryl Popig, CTO – Accelerated Data Concepts LLC (614)309-8661

I am supervising this summer's interns in a technical work environment. This is the first time I have been involved with Future Jobs.

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

This is new product development but the value should be more than $10,000.

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree – Our business is dependent on leading edge technology in re-configurable computing. This is not commonly taught at the under graduate level at universities so our Future Jobs internship enables this knowledge to be acquired through Accelerated Data Concepts by the project work that the interns are involved in.

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree – We offer a very flexible work environment and this allows the interns to acquire the needed skill set and to integrate those skills into the work at their own pace which fosters innovation and creativity. Our business model depends on this innovation to get our product into the lead in a very competitive market space.

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree – I think that the Future Jobs program is a win-win where the intern will acquire valuable skills that are very marketable in the high technology sector and ADC can get the additional help needed in product development which is under a tight budget and tight time constraint.

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Agree – early on I worked with Eric Stahlberg (Wittenberg Univ.) to see if there was a match to our requirements from their computer science curricula but none of our Future Jobs interns this summer ended up being from Wittenberg.

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree – The Future Jobs program has allowed us to build skill sets with these interns in re-configurable computing concepts and parallel algorithm development which will give them the opportunity to possibly become full time employees with Accelerated Data Concepts after they graduate.

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.

Two internships this summer; the first internship is on schedule but it is too early to tell what the results will be, however, the intern has acquired some very good skills and she has the talent to carry the project forward. The second internship just started and is in its second week which means it is too early to tell the outcome but so far the intern has demonstrated his ability to do the tasks that we have asked him to do.

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)

Overall experience with Future Jobs has been very positive. Andrea was very helpful in helping me in finding the interns that were the right fit for the work we wanted them to do and she was very responsive to questions and very helpful in setting up the logistics part of the internships. I would recommend Andrea to any company that was interested in offering internship positions.

FUTURE JOBS I EDUCATIONAL INSTITUTION SURVEY

Briefly describe the individual(s) that are completing this survey including contact information:

David H. Devier, Ph.D.
Vice President, Academic and Student Affairs
Clark State Community College
570 East Leffel Lane
Springfield, Ohio 45505
(937) 328-6026
devierd@clarkstate.edu

1.) What has the long term value of Future Jobs been on your institution?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

2.) The Future Jobs funded program(s) at your institution have helped to attract students into STEM majors. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

3.) The Future Jobs funded program(s) at your institution have helped to attract students into Healthcare Information and Imaging Processing Technology focus areas. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

4.) Did the Future Jobs pilot project help prepare your students for professional experiences? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

5.) Has Future Jobs played a role in aiding your institution to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

6.) Has Future Jobs played a role in bolstering faculty interest and support in STEM programs? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

7.) Please list the number of students that have participated in your Future Jobs funded program(s) since its inception.

20

8.) Were the Future Jobs funded programs at your institution sustained following the Future Jobs pilot project? If no, please include feedback on why each program ended.

Yes

9.) Describe your overall experience with the Future Jobs I pilot project (E.g. what went well, where we can improve, etc.).

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

JJR Solutions

Linda Skinner, Chief Operating Officer

Chuck Destefani, Chief Technology Officer

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

Currently we can assess the value at $5,000 having one excellent candidate!

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree. Our candidate came very well prepared and began working as though he had been in the professional arena for years.

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree. We have had a tremendously successful experience with our first internship opportunity and look forward to more opportunities.

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly agree. We are in the process of identifying additional candidates for summer work and look forward to continuing on with the Future Jobs Internship Program.

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

We have not participated in this effort.

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree.. Future Jobs is helping us to develop a list of interns that we can use in the future as well as viable candidates for employment.

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.

… – excellent intern. Very articulate, detail oriented, and hard working. Brian was tasked with a number of jobs that he completed either on time or in advance of any due date.

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)

Our first experience has been outstanding. We have very much enjoyed the interaction with Andrea Frederick and her ability to provide us with resumes of very qualified candidates.

Not having that much experience with internships, we are unable to provide any feedback with regard to what needs to be improved upon.

FUTURE JOBS I EDUCATIONAL INSTITUTION SURVEY

Briefly describe the individual(s) that are completing this survey including contact information:

Eric J. Balster, balsteej@notes.udayton.edu, 937-469-4628

1.) What has the long term value of Future Jobs been on your institution?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

2.) The Future Jobs funded program(s) at your institution have helped to attract students into STEM majors. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

The Future Jobs funding has given us the ability to showcase what kind of jobs are available to potential Electrical and Computer Engineering graduates by demonstrating different research projects that we have conducted with the Future Jobs funding, and how those projects fit into advanced products, developed by local businesses.

3.) The Future Jobs funded program(s) at your institution have helped to attract students into Healthcare Information and Imaging Processing Technology focus areas. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

The Future Jobs funding has allowed us to show how new image processing techniques can help advance the state of the art in surveillance technology, potentially benefitting customers such as local law enforcement, etc. Coupled with our other research programs in medical imaging, etc., the Future Jobs funding highlights the local expertise and the regional industries working to advance the state-of-the-art in these technical areas.

4.) Did the Future Jobs pilot project help prepare your students for professional experiences? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

The Future jobs project has fostered strong working relationships between my graduate students and local industry. They currently are working on projects at the request of local industry, and the output of their research can directly impact the success of the products developed by these companies.

5.) Has Future Jobs played a role in aiding your institution to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

It is still early, and it takes awhile for work to migrate from research to the classroom, but I believe that we are building a set of knowledge that will surely migrate to 1 or 2 graduate courses in image processing.

6.) Has Future Jobs played a role in bolstering faculty interest and support in STEM programs? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

7.) Please list the number of students that have participated in your Future Jobs funded program(s) since its inception.

I have had 2 graduate students and 1 undergraduate student employed under the Future Jobs funding. Currently, there is one graduate student funded under this effort. In addition, the Future Jobs funding has supported 5 other undergraduate students in internships with local companies.

8.) Were the Future Jobs funded programs at your institution sustained following the Future Jobs pilot project? If no, please include feedback on why each program ended.

Yes, we have been able to obtain funding from other organizations such as AFRL/RY and Ohio 3rd Frontier, based upon the work and relationships developed by the initial funding provided by the Future Jobs program.

9.) Describe your overall experience with the Future Jobs I pilot project (E.g. what went well, where we can improve, etc.).

Our experience with the Future Jobs program has been incredible. We would not have been able to establish our current technical capabilities without this funding. The research laboratory development work the program supported has made us a credible competitor for other federal agency and industry funding.

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

Gary L. Rapp – Co-Founder, COO, Intern Supervisor

Zia Systems, LLC

garyrapp@ziasystems.com

614-419-4581

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

As this is the first time we have used an Intern from Future Jobs, the long term value is unknown. However, thus far, the intern has been extremely helpful in handling some of the technical problems and issues that our company has faced. If anything, I would anticipate a long term value of $5000 or more.

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

I strongly agree that the program has helped our intern prepare for working at a business such as ours. We are a start-up company, and our intern has said more than once, that this opportunity has given him a better understanding of working with a small business, and has enjoyed the excitement of being involved with some of the day-to-day issues.

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Thus far, after one month, I agree that our intern has opened our eyes to the benefits of utilizing the Future Jobs Internship program. Our intern has been instrumental in solving some technical issues that we have faced with our website and application program.

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Yes, I agree that we would be interested in participating in the Future Jobs Internship program in the future.

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

N/A

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

N/A

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.

This summer intern is our first student funded by Future Jobs. Our experience has been excellent thus far.

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)

We are satisfied with the overall experience thus far, with the Future Jobs I pilot project.

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

Cathy S. Balas is completing this survey. Cathy's position is Executive Director, Education/Communications at Avetec. Inc. She has been involved with Future Jobs and its working group. Contact: cbalas@avetec.org

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

More than $10K

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree: We have hired one future jobs intern through the program.

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree: All students we have had at Avetec have contributed to the company and have gained experience in a STEM company.

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree: The funding for the wages helps us cover some of the costs of training and mentoring the students and is appreciated.

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

I don't know how to rate this one. I am not aware if the educational partners have done anything new to their curricula or not.

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

Strongly Agree: We have hired one future jobs intern through the program.

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.
We have had 3 interns through Future Jobs and our overall feedback on each is very positive. Two of the three are now working at Avetec, one as a summer intern and one as a part-time employee. We would consider hiring the third if we have a vacancy. Each of the interns contributed positively to their assigned projects and each showed professional and career growth while with us**.**

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)

What went well:

The payroll process was smooth and easy.

The student evaluation forms were good and straightforward.

The students were motivated and interested in improving their professional and technical skills.

Improvements:

Application flow was generally good and improved towards the end—at first it wasn't as clear

It would be great if the students also obtained academic credit in addition to pay for their work.

THANK YOU!

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

Minda L Moore; CEO; KLSS Inc; New to group

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Future Jobs has a done a great job at pre-qualifying good candidates based on our companies needs

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

We have only had our intern supporting us for about 1 week but she has shown to have the skill sets, work ethic and drive that should be of great benefit to our company

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

If possible we would have loved to have one other intern this year to assist with several growth opportunities this company is undertaking. We will look to leverage future jobs in the future.

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

This is the company's first time partnering with future jobs but look for form a strategic partnership for years to come.

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.

1 intern that begin June 15th 2010

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)

Would love to provide feedback at the end of the internship in August 2010

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

Tina Lastowski
Qbase LLC
HR Director
New to the group

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

We hired FT upon graduation a FJ intern. In addition, we would have liked to hire the others FT if timing was better. They were all fantastic interns.

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

We hired FT upon graduation a FJ intern. In addition, we would have liked to hire the others FT if timing was better. They were all fantastic interns.

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

We benefit greatly from the overall support of the program. It complements our internal processing and intern recruitment efforts nicely.

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

I have been tasked to provide input for curricula to our previous internal FJ point of contacts. With internal changes I have been asked to be a point of contact. I anticipate involvement with the curricula development to increase with this change.

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

FJ has been great at assisting Qbase with recruitment efforts of interns.

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.

3 interns. They were all fantastic.

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)

We were very pleased with the FJ pilot project. The support was fantastic and the interns were wonderful.

FUTURE JOBS I EMPLOYER SURVEY

Briefly describe the individual(s) that are completing this survey including company, position, involvement in Future Jobs (attend regular working group meetings, intern supervisor, new to the group, etc.) & contact information:

UES, Inc.

Director, Human Resources

Deborah E. Yount

(937-426-6900) x102

1.) What has the long term value of Future Jobs been on your business?

Detrimental **No Value** **$5,000** **$10,000** **More than $10,000**

Undetermined at this time.

2.) The Future Jobs Internship Program helped prepare your interns for professional experiences to work at your business. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Agree. The Future Jobs Internship Program helped assisted in the selection process for matching qualified students to appropriate intern opportunities.

3.) The Future Jobs Internship Program provided your business with a successful internship experience. Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree. All aspects of the Future Jobs Internship Program from beginning to end have been a very successful experience for UES, Inc.

4.) Would you be interested in participating in the Future Jobs Internship Program again? Please comment on your rating.

Strongly Disagree **Disagree** **N/A** **Agree** **Strongly Agree**

Strongly Agree. I am very interested in participating in the Future Jobs Internship Program again and I am hopeful that our company can be more actively involved in assisting the universities and students with direct business experience.

5.) Did you feel actively engaged in working with our educational partners to create employer relevant curricula? Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

I am not sure where the responsibility of "creating employer relevant curricula" belongs. In any case, there is much work needed in this category.

6.) Has Future Jobs played a role in aiding your business to produce a pipeline of more prepared interns and employees? Please comment on your rating.

Strongly Disagree Disagree N/A Agree Strongly Agree

Agree

7.) Please list the number of Future Jobs funded students that have interned at your business and your overall feedback on each intern.

2 - …both from Wittenberg University. These students have done an excellent job performing the requirements of the position. They are able to work independently in the lab and are very dependable. We have truly enjoyed our experience with them and are hopeful that they have absorbed a great deal of experience which will benefit them next year in school and in the careers.

8.) Describe your overall experience with the Future Jobs I pilot project. (E.g. what went well, where we can improve, etc.)

My/UES overall experience has been wonderful. I have enjoyed working with the Universities directly and searching for students who would benefit the most from this experience. I am very passionate about this program and believe that universities and employers need to team more to assist our youth in their education and eventual career search.

My suggestion for improvement is that the universities work with employers early on to improve their course curriculum to incorporate new areas of research. I also strongly feel that the universities should incorporate more research/laboratory site visits into their course work so that students can see how their coursework ties directly to business research. This will assist the students in understanding employer expectations.

Appendix H: Future Jobs Marketing Material

Here's what our Interns had to say about their internship experience:

"Future Jobs helped me to apply what I am learning in school on real world projects. My internship has really expanded my knowledge and it has given me the experience I need to start off my career the right way."
-Software Engineering Intern, Qbase

"The biggest thing about my job at Avetec is the professionalism. I'm working with a lot of brilliant people - people with experience and with PhDs - and they treat me like a peer. I've learned so much about how to behave and operate in a corporate setting, and the amount I've learned and accomplished has been tremendous. The difference between my resume now and from 8 months ago is amazing."
-Information Technology Intern, Avetec

"My internship has been an exceptional supplement to my graduate studies. I've significantly benefited from the challenges of exposure to a multitude of complex technical and business issues. Additionally, I've enjoyed the thought-provoking research I've been tasked with, which has allowed me to make meaningful contributions for CACI."
-Technical Intern, CACI

"The hands-on, real world experience that I am gaining through my internship at Qbase is proving to be invaluable. Qbase has presented me with the opportunity to acquire IT skills in a fun and rewarding learning experience that I could never receive at school. The professionalism that Qbase has shown me is like no other place I have worked. Everybody I worked with is courteous, friendly, and always willing to help me out when needed. I feel proud to be a part of the Qbase team providing solutions and helping our customers and appreciate the opportunity Qbase has given me."
-Information Technology Intern, Qbase

www.ohiofuturejobs.org