Dear CSE Students:

Welcome to the fifth newsletter of the fall 2014 semester.

**Undergraduate Program (CS and CpE):** Have a Happy Thanksgiving!

**Undergraduate Program (IT):** Doing an IT Senior Project in the spring? Don’t get behind the power curve! See [http://www.cse.usf.edu/undergraduate/department_forms/](http://www.cse.usf.edu/undergraduate/department_forms/) for forms and details. Step 1: Your Letter of Intent, needed to enroll in the course. Step 2: Your IT Senior Project Contract. IT Seminar requirements. To get credit for the IT Seminar course, you must attend six seminars, *at least three* of which must be program-sponsored colloquia, and *up to three* of which may be student led seminars, at which results of an IT Senior Project are presented. Seminar credits may be accumulated at any time you are a student; just make sure you enter your name on the sign-up sheep at the colloquium. You should actually register for the IT Seminar course for the semester in which you expect to *complete* the six-seminar requirement.

**Graduate Program:** Application to Admission to Candidacy is due November 21. You will only be able to register for dissertation hours for the Spring once your application has been approved. Applications for Graduation in Spring 2015 are due December 1. For all deadlines, see the Graduate calendar on the CSE website. Forms can be found at: [http://www.cse.usf.edu/graduate/current_students/graduate_forms.](http://www.cse.usf.edu/graduate/current_students/graduate_forms.)

Attached are announcements for the following (please note that this listing does *not* imply University or Department endorsement in any way):

- Summer Research and Graduate Funding: Resources to Share with Students
- Carnegie Mellon University’s IT Lab Summer 2015 Internship Opportunity
- U.S. Department of Homeland Security (DHS) 2015 HS-STEM Summer Internships
- MindSumo Projects
- Application Development Intern at Jabil
- Software Development Intern at ThreatTrack Security – Clearwater, FL
- Software Engineer Intern at ThreatTrack Security – Clearwater, FL
- Test Engineer Intern at ThreatTrack Security – Clearwater, FL
- Smart Grid Systems Analyst for City of Lakeland (full-time position)

Regards,

Ken Christensen
Director of the Undergraduate Program (and Newsletter Editor)
Email: christen@csee.usf.edu

The archive of old newsletters can be found at [http://www.cse.usf.edu/newsletter](http://www.cse.usf.edu/newsletter)
Summer Research and Graduate Funding: Resources to Share with Students

For Undergraduates:
Paid Summer 2015 Undergraduate Research Placements:
Over 800 programs – REU, NASA and other paid summer research opportunities for undergrads
http://www.pathwaystoscience.org/undergads.aspx

For Financial Support in Graduate School:
Fellowships and graduate programs in a wide variety of STEM disciplines:
http://www.pathwaystoscience.org/grad.aspx

For NASA-supported internships, fellowships and scholarships:
http://intern.nasa.gov

For tips on applying and associated resources:

For opportunities specifically in the Ocean Sciences:
http://www.pathwaystoscience.org/oceanscience.aspx

For opportunities specifically in Engineering:
http://www.pathwaystoscience.org/engineering.aspx

We’d be happy to answer any questions you have and to provide your students with assistance in applying to these programs.

Thanks and best wishes for a Happy Thanksgiving,

Liv Detrick
Institute for Broadening Participation

Follow us on Facebook!
https://www.facebook.com/pages/Pathways-to-Science/120825625433

IBP’s mission is to increase diversity in the Science, Technology, Engineering and Mathematics (STEM) workforce. We design and implement strategies to increase access to STEM education, funding, and careers, with special emphasis on reaching underserved communities and diverse underrepresented groups. www.PathwaysToScience.org makes it easy for faculty and administrators to access resources that can assist them in their efforts to reduce barriers to participation, create environments rich in the positive factors that support student success on the STEM pathway, and conduct outreach to underserved communities and underrepresented groups by implementing recruitment and retention strategies that broaden participation and increase diversity.
Summer 2015 Internship Opportunity

- Paid seven-week fellowship
- Study with the world’s leading analytics researchers
- Data analytics and innovation coursework

Carnegie Mellon University’s H. John Heinz III College will host the 2015 IT Lab Junior Summer Institute, a highly competitive seven-week program (June 12 - August 1, 2015). CMU’s Heinz College will provide a stipend in addition to completely covering the cost of participating in this unique summer internship opportunity. This includes tuition, books and supplies, transportation to and from Pittsburgh, housing, meals, and social functions.

Successful Applicants will:
- be entering his/her senior year in August 2015
- be a U.S. Citizen or Permanent Resident
- have a cumulative GPA of 3.2 or higher
- be in a STEM-related or other relevant major
- complete the online application process by December 1, 2014: heinz.cmu.edu/itlab

This program is designed for U.S. citizens pursuing technical undergraduate degrees such as computer science, engineering, math, physics, information technology, business information systems, or other related fields.

Students in CMU’s IT Lab will interact with top CMU faculty on research projects in urban systems, digital entertainment analytics, healthcare IT, and data privacy. Along with their experiential learning activities, IT Lab fellows will take two summer courses at CMU, one in empirical methods and one in innovation.

Application Deadline: December 1, 2014

Contact: David Eber - deber@cmu.edu

CURRICULUM AND FACULTY HIGHLIGHTS

ENTERTAINMENT ANALYTICS
Growth of the Internet and mobile devices has created new distribution opportunities in the entertainment industry as companies innovate to meet changes in consumer demand, giving rise to new business challenges from digital piracy networks, bringing issues of copyright, intellectual property and counterfeiting to the forefront. Heinz College faculty conduct research into timely public policy and managerial questions raised by the emergence of digital distribution channels specific to entertainment content.


HEALTHCARE IT
A primary goal of Heinz College’s healthcare research is to improve IT-enabled decision-making. Working closely with hospital systems, insurance companies, and government and public health organizations, faculty have developed decision support systems to improve patient flows in hospitals, manage chronic diseases and predict the occurrence of major health events such as influenza outbreaks or the contamination of food or water supplies. The research employs a variety of techniques including optimization, data visualization and machine learning.

Featured Faculty: Rema Padman is a Professor of Management Science & Healthcare Informatics at the Heinz College. Professor Padman’s research addresses problems at the interface of healthcare, information technology and management science. Her current research in the healthcare domain investigates data mining methods for healthcare decision support, particularly for point-of-care disease management. The National Science Foundation, National Library of Medicine, DARPA, and the Army Research Office have funded her research on these topics.

DIGITAL PRIVACY
Heinz College’s digital privacy research focuses on the economics and behavioral economics of privacy with a particular emphasis on social networks. When questioned, people will often say their privacy is of utmost importance, but their online actions reflect a much different picture. CMU houses both CyLab and CERT, world-class hubs of leading information security and assurance research.

Featured Faculty: Alessandro Acquisti is an Associate Professor of Information Systems and Public Policy at the Heinz College and the co-director of the CMU Center for Behavioral Decision Research (CBDR). His studies have been published in leading journals across diverse disciplines and featured in the Wall Street Journal, NY Times, and 50 Minutes. Alessandro has been the recipient of the PET Award for Outstanding Research in Privacy Enhancing Technologies, the IBM Best Academic Privacy Faculty Award, the Heinz College’s School of Information Teaching Excellent Award, and various best paper awards. He has been awarded research grants from the National Science Foundation, Transcoop Foundation, Google, and Microsoft.

URBAN SYSTEMS & TRANSPORTATION
Traffic21 is a multi-disciplinary research initiative of Carnegie Mellon University. Its goal is to design, test, deploy and evaluate IT based solutions to address the problems facing urban transportation systems. The Pittsburgh region serves as a “learning lab,” deploying solutions that can be applied around the nation and the globe.

Featured Faculty: Al Biehler is a Distinguished Service Professor of Transportation Systems and Policy at the H. John Heinz III College at Carnegie Mellon University and Executive Director of CMU’s University Transportation Center. Prior to his Heinz appointments, Al served as Secretary of the Pennsylvania Department Transportation for eight years leading an organization that operated the nation’s fifth largest state highway system. Al’s focus on sustainable transportation practices led to the creation of the State Smart Transportation Initiative (SSTI).
Now accepting applications

The U.S. Department of Homeland Security (DHS) sponsors a 10-week summer internship program for undergraduate and graduate students majoring in homeland security related science, technology, engineering and mathematics (HS-STEM) Disciplines. The program provides students with quality research experiences at federal research facilities located across the country and allows students the opportunity to establish connections with DHS professionals. It is open to students in a broad spectrum of HS-STEM Disciplines and DHS mission-relevant Research Areas.

**Undergraduate students receive a $6,000 stipend plus travel expenses.**

**Graduate students receive a $7,000 stipend plus travel expenses.**

**10-week research experiences are offered at:** Argonne, Berkeley, Livermore, Los Alamos, Oak Ridge, Pacific Northwest, and Sandia National Laboratories; as well as at Homeland Security Studies and Analysis Institute, Coast Guard Research and Development Center, Customs and Borders Protection Laboratories and Scientific Services, Domestic Nuclear Detection Office, Federal Emergency Management Agency, Naval Research Laboratory, Engineer Research and Development Center, National Security Technologies Remote Sensing Laboratory, Transportation Security Laboratory, and more.

**Areas of research:** Engineering, computer science, mathematics, physics, chemistry, biological / life sciences, environmental science, emergency and incident management, social sciences, and more.

**U.S. citizenship required**

**Application deadline:** December 22, 2014

Detailed information about the internships can be found at: [http://www.orau.gov/dhseducation/internships/](http://www.orau.gov/dhseducation/internships/)


Previous participants testimonials can be found at [http://www.orau.gov/dhseducation/internships/stories-hsstem.html](http://www.orau.gov/dhseducation/internships/stories-hsstem.html)

DHS has partnered with the Oak Ridge Institute for Science and Education (ORISE) to manage the program. For questions please email us at [dhsed@orau.org](mailto:dhsed@orau.org)
Hi Kenneth,

Hope all is well and that you had a wonderful Halloween weekend! At the start of the new month, we have some incredible new MindSumo projects for your Computer Science students.

Can you please share the note below with your students and reply to this email to let me know you were able to do so? The best way to share is to copy and paste the note and send it to your Computer Science student listserv, but any means of sharing the projects is encouraged.

Thanks for sharing these opportunities for your students to get work experience and win prizes by applying the skills they’re learning in classes. Please let me know if you have any questions!

--Begin note to students--

Dear Students,

Please review the latest Computer Science projects from MindSumo. MindSumo partners with employers to create projects that you can complete to get work experience, win prizes, and be hired for jobs and internships.

**How would you revamp Cigna’s database architecture?** - $600 in prizes

**Propose the best way to tell a story through photos for General Mills** - $1000 in prizes

Questions can be directed to aaron@mindsumo.com

Direct Links:


Hiring Manager
Marc Braga – Marc_Braga@Jabil.com

Department
Jabil - Engineering & Technology Services

Title
Application Development Intern

Summary
The Application Development Intern will be responsible for supporting existing systems as well as developing new technologies. The ideal candidate must display excellent written and oral skills and must be able to work in a varied, fast paced environment.

Primary Duties and Responsibilities

- Develop new web applications as identified by supervisor through packaged and customized applications.
- Candidate must be a team player and willing to teach and learn.
- Perform complete testing of web applications, engaging users as necessary.
- Develop database-driven web interfaces for rapid, real-time information sharing.
- Participate in code review and architecture sessions.
- Collaborate with the team to successfully roll out new functionality and to support ongoing maintenance.
- Follow agile methodologies and engineer iterative developmental phases as needed

Education/Experience

- Able to work independently and efficiently to meet deadlines.
- Able to promptly answer support related email, phone calls and other electronic communications.
- Self motivated, detail-oriented and organized.
- Proficient in Internet related applications such as E-Mail clients, SVN, FTP clients and Web Browsers.
- Excellent communication (oral and written), interpersonal, organizational, and presentation skills.

Qualifications

- Bachelors degree in computer science, MIS or related experience. Enrolled students welcome.
- Salesforce.com development experience is a big plus
- Must possess strong knowledge of Object Oriented Programming
- Must have experience with CSS, Javascript and/or jQuery
- Ability to follow coding and design standards a must.
- Experience in C#, SQL, ASP.net a plus
- Strong attention to detail
- Experience with Visual Studio is a plus

Key Performance Measures:

- Successful delivery of assigned application development tasks and projects.
- Excellent customer service experiences by internal and external customers.
- Effective collaboration with teammates and the organization in an Agile development environment
- Positive contributions to the organization beyond the scope of normal responsibilities.
Software Development Intern – Clearwater, FL
Are you interested in computer security? Do you enjoy challenges? ThreatTrack Security is looking for a Software Development Intern to join our team in January 2015. This is an intern position with the VIPRE Development team. This person will gain experience and may transition to an Associate Developer if they perform well.

ESSENTIAL DUTIES AND RESPONSIBILITIES
The ideal candidate will be a highly motivated individual with good interpersonal skills and the ability to perform detail oriented tasks with the goal of producing high quality code. You will be expected to work well within a team that sets aggressive schedules and provide creative solutions to the needs of the business community. We expect you to be knowledgeable about C#.NET programming and Object Oriented design. Good debugging skills will be required.

Required Qualifications:
- A Senior level college student in some type of Computer Science.
- A good C#, .NET skillset including both design and coding.
- Good debugging skills.
- Experience with SQL – writing queries and database design
- The ability to work as a team member.
- Demonstrated ability to think creatively.
- Items that would be a plus:
  - Experience with WinForms
  - Experience with any of the following: DevExpress Windows components, XML, LINQ, Sqlite, WCF, Web Services, C++
  - Experience with the Agile development process.

If you are interested in pursuing any of our internship positions, please apply through our website at [www.threattracksecurity.com](http://www.threattracksecurity.com).
You can also contact our Corporate Recruiter for additional information at [Jeanne.Coury@threattrack.com](mailto:Jeanne.Coury@threattrack.com).
Software Engineer Intern – Clearwater, FL

Are you interested in computer security? Do you enjoy challenges? ThreatTrack Security is looking for a Software Engineer Intern to join our team in January 2015. This Internship will be to help the Infrastructure Team complete tasks that are needed to release high quality products to our customer base.

REPORTING RELATIONSHIP: Reports to Senior Software Engineer

ESSENTIAL DUTIES AND RESPONSIBILITIES
- Must be familiar with Java development
- Familiar with Unix environments, including navigating the file system and command line operations
- Develop unit tests for the product you are working on
- Verify bugs once they are fixed
- Documenting system components
- Attend/participate in scrum meetings, including daily stand ups

EDUCATIONAL/BACKGROUND NEEDED
Must have at least two years of computer science degree completed.
Must have completed COP 3514 (Program Design) and COP 4530 (Data Structures)

If you are interested in pursuing any of our internship positions, please apply through our website at
You can also contact our Corporate Recruiter for additional information at
Jeanne.Coury@threattrack.com.
**Test Engineer Intern – Clearwater, FL**

Are you interested in computer security? Do you enjoy challenges? ThreatTrack Security is looking for a Test Engineer Intern to join our team in January 2015. This Internship will be to help the Test Engineering Team complete tasks that are needed to release high quality products to our customer base.

**REPORTING RELATIONSHIP:** Reports to Senior Test Engineer

**ESSENTIAL DUTIES AND RESPONSIBILITIES**
- Update existing test cases
- Create test cases for new functionality
- Execute product test cases
- Document bugs in our bug tracking system
- Verify bugs once they are fixed

**EDUCATIONAL/BACKGROUND NEEDED**
Must have at least two years of computer science degree completed.

If you are interested in pursuing any of our internship positions, please apply through our website at [www.threattracksecurity.com](http://www.threattracksecurity.com). You can also contact our Corporate Recruiter for additional information at [Jeanne.Coury@threattrack.com](mailto:Jeanne.Coury@threattrack.com).
GENERAL DESCRIPTION OF CLASS:
The Smart Grid Systems Analyst is responsible for supporting business analyses, system management, operations and documentation, administration and maintenance of items relating to the Advanced Metering Infrastructure (AMI), Remote Network Interface (RNI), Oracle Dataraker and the Meter Data Management System (MDMS).

Performance is reviewed for effectiveness through reports, performance metrics and results obtained.

ESSENTIAL FUNCTIONS:
• Organizing, reviewing and cleaning Smart Grid data sets for analysis
• Investigate problems and errors associated with the Smart Grid systems (software and hardware)
• Assist in recommending standards for Smart Grid system performance
• Run Smart Grid system performance reports (daily scorecards, etc.)
• Monitor and analyze the performance and recommend changes, upgrades and expansions
• Maintain a current knowledge of LE meter and billing processes, work methods and process flows to utilize AMI system information to assist Energy Delivery, Customer Service and other divisions to optimize field operations (reliability, asset performance and customer response), meter reading, billing and collection process efficiencies
• Prepare and maintain the necessary records, reports, and documentation for assigned tasks
• Create and monitor service orders and follow up to ensure completion

ADDITIONAL RESPONSIBILITIES:
• Contribute to project management in a team context
• Performs related work as required

QUALIFICATIONS (EDUCATION, TRAINING AND EXPERIENCE):
• A bachelor’s degree in Computer Systems from a recognized and accredited university.
• Performs related work as required
• A master’s degree in Computer Systems and experience with large databases along with a background in Data Assurance and Data Security is preferred
• Programming experience in SQL, Java web applications, Enterprise Service Bus, Linux and Microsoft Office experience are preferred

OR an equivalent combination of education, training and experience which provide the necessary knowledge, skills and abilities and other competencies necessary for success in the target position.

KNOWLEDGE, SKILLS, ABILITIES, COMPETENCIES:
• Programming experience Knowledge of computer and communications systems
• General knowledge of metering and smart grid technology
• Ability to learn workforce management systems and their application
• Ability to understand and incorporate workforce and public safety concerns and occupational hazards associated with electric system construction, maintenance and operations into work processes
• Excellent written and oral communication skills
• Ability to establish and maintain effective working relationships with supervisors, co-workers,
professionals, technical and skilled employees along with the general public
• Conduct oneself in a professional, friendly and reliable manner with a focus on commitment to service excellence
• Possess strong communication skills and attention to detail, with the ability to compile information, draw conclusions and relay findings to management and customers
• Experience manipulating complex data sets and cleaning and analyzing data
• Detail-oriented, results driven and respond to inquiries in a timely manner
• Knowledge of electrical distribution systems is beneficial but not essential as long as it can be acquired within 12 months

SPECIAL REQUIREMENTS:
• Must possess a valid state of Florida driver's license.
• Must maintain a valid home telephone number.
• May be required to work overtime, or alternate hours, as necessary for the efficient operation of the department. Position may be designated as Mission Critical by Department Director.

WORKING ENVIRONMENT:
• The job requires sedentary work that involves walking or standing some of the time, exerting up to 10 pounds of force on a recurring basis, and routine keyboard operations.
• The job risks exposure to no significant environmental hazards.
• The job requires normal visual acuity, and field of vision, hearing, speaking, color perception, sense of taste, sense of smell, depth perception, and texture perception.