Software Engineering at RIT

The Changelog

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Alumni Spotlight

We had a couple of alumni join us on our Industrial Advisory Board this year! Our IAB reviews some of our research and our curriculum. Throughout the course of Thursday and Friday, they meet with undergraduate students, review Senior Project posters, provide feedback on research projects, and hear from the Department Chair, Dr. Naveen Sharma, on the happenings within the department. Below are the bios of participating alumni:

Tim Hennekey, Tech Lead at HubSpot: I graduated in 2005 from RIT with a bachelor's degree in Software Engineering. I worked for a few years as a software engineer at (then) Goodrich Aerospace (now UTC) and then Nuance Communications. I currently work at HubSpot as a tech lead.

Russ Zumwalt, Director of Prime Mobile application development at the Construction and Engineering Global Business Unit of Oracle: He's an alumnus of RIT, graduating in 2005 with a BS in Software Engineering and currently lives in Buffalo, NY.

Office Happenings

In the fall, Sarah Mittiga accepted an offer to switch to a part-time academic advising position. To fill the open full-time position, the college did a search and we're happy that Megan Lehman joined the Software Engineering department as an Academic Advisor. Megan started in early February and has already started advising many SE students. Megan is now the advisor for the Society of Software Engineering.

Sarah's role within the SE department will continue to change as the students she advises graduate. Next fall, she'll begin advising freshmen in the Computing Exploration Program.

Another personnel change involves the front office staff: Chelsea O'Brien will be leaving RIT and begin a new role at Genesee Community College. Chelsea will be working with Dawn and other members of the SE department to transition some of her responsibilities to other people until a new Office Manager is hired.

Research Assistant Story

We asked graduate students involved in research to tell us a bit about what they are doing. Below is a submission by Niharika Dalal.

I'm researching under the guidance of Dr. Oliver Wang, an assistant professor in the Software Engineering Department at RIT. He earned his Ph.D. in Information and Computer Science at the University of California, Irvine. He previously worked as a Research Staff Member in IBM Almaden Research Center. His current research focuses on using game theory to investigate collaborations in Global Software Development (GSD), developing novel software tools to support GSD practices, and learning and modeling an individual's characteristics from user-generated social media.

I had applied for a graduate assistantship before the commencement of the Fall 2017 courses and was notified about having earned the assistantship under Dr. Wang. On briefing me about the projects he was working on, he let me select one of them as my topic for the graduate assistantship. I chose to work on building a visualization tool for emotion or sentiment analysis which is branched under NLP. I had not studied natural language processing in my undergraduate course, and hence, took this as an opportunity to learn more about this field and to broaden my horizon on the subject. As I explored

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Software Engineering
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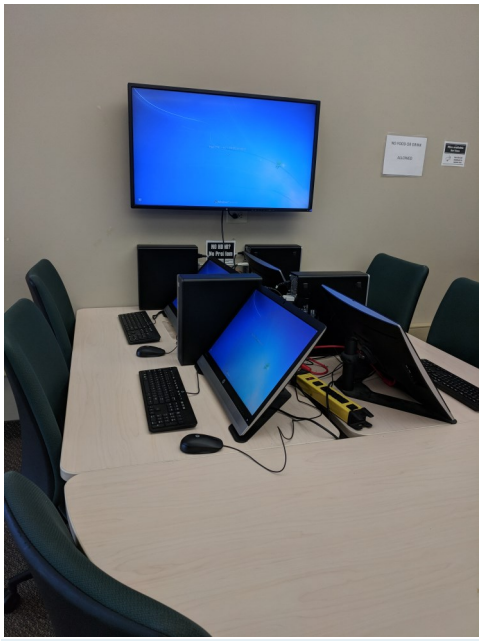

NLP, my interest in it grew and I took up sentiment analysis as my topic for my Research Methods course in my first graduate semester. This not only made a good research topic, but also gave me the window to research on it further.

For this research, I'm using Python and its NLP libraries to create the application for analyzing sentiments from textual data obtained from relay chats. This is helping me learn more about the various libraries in Python, the features it has to offer and overall implementation (hands-on practice) in the language. This has also exposed me to 'D3.js' which is a JavaScript visualization framework used for interactively communicating data and information with users. Along with the technical advantages proffered, this requires one to manage work with academics, in turn providing a great opportunity to get the experience of working under pressure in certain situations at certain times and not succumbing to it, which I personally feel is an important quality to develop.

Artificial Intelligence, where the software industry is headed, finds its major applications in natural language processing which involves machines reading textual data by simulating the human ability to understand language. This research will help me understand NLP in depth and in deciding my career interest after graduation. Python is one of the most commonly used languages in the software industry. Having a good implementation practice and command over the language will give me an advantage over the others, which is what recruiters look for in candidates while hiring.

Along with the benefit of a decent pay, the scholarship is a supportive and gratifying financial aid. My experience of working as a graduate assistant for three months now, has been fulfilling and I am very thankful to the Department of Software Engineering for providing this opportunity to me.

The Places We've Been

Assistant Professor Mohamed Wiem Mkaouer's Ph.D. student Hussein Alrubaye has been awarded Microsoft Valuable Professional for the year of 2018. They traveled to Seattle, from March 4th to March 8th to attend the Microsoft MVP Global Summit.

The conference was a great opportunity for Hussein and Prof. Mkaouer to connect with product owners and managers of several Microsoft products (Azure, Visual Studio, etc.) and also meet with other MVPs from all over the world. It helps them establish relationships with Product Managers, and Summit speakers by sharing ideas, and exchanging solutions. This networking opportunity has allowed them to share their ideas with the community to get feedback. They also started discussions with some developers in order to build long-term collaborations that potentially may lead to funding opportunities.

In March, Andy Meneely traveled to Maryland for a kickoff meeting for the NSA Science of Security Lablet. He presented his research on attack surface metrics to NSA scientists and other NSA-funded researchers from the top universities in cybersecurity.

Submitted Research/Grants

Since early December the department has had 11 proposals submitted, many of which are still pending. Faculty within the department have been awarded three grants since December first: Dan Krutz, Assistant Professor, his grant titled OVPR—Reducing Tractic Latency Uncertainty in Self-Adaptive Systems was funded for $4,990; Mehdi Mirakhorli's grant titled REU Site: Cultivating Next Generation Software Engineering Researchers was funded for $360,000; and Andy Meneely's grant Examining Human Dimensions of Secure Coding was funded for $48,500.

Dan Krutz submitted the following grants: STEM Educational Outreach for Young Women in the Rochester area through Rochester Area Community Foundation; and Developing Experiential Laboratories for Computing Accessibility Education through NSF.

Mehdi Mirakhorli submitted the following grants: Characterizing Architectural Vulnerabilities through NSF; Science of Software: A Technical Forecasting Study of Resilient and Mission Critical Software for Air Force through USAF; and CRI: CI-NEW: Collaborative Research: Constructing a Community-Wide Software Architecture Infrastructure through NSF.

Pradeep Murukannaiah submitted the following grants: SCC: Citizenly: Empowering Communities by Connecting Citizens' To Neighborhood Data and Data-Driven Applications through NSF; and CRI: CI-P: Collaborative: Principedia: A Privacy Incidents Community Platform through NSF.

Christian Newman and Oliver Wang submitted the following grant together: SHF: SMALL: RUI: Collaborative Research: Enhancing Name Appraisal and Synthesis Using a Source Code– Natural Language Model through NSF.

Oliver Wang submitted the following grant: Supporting Cooperation in Globally Distributed Team: Analyses and Computational Tools Based on Networked Game Theory.