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Work Experience

Microsoft Research Cambridge UK

Research Intern • May 2014 - August 2014, May 2015 - August 2015

- Innovated and developed a data-driven approach to attack surface estimation; approach implemented on product teams within the company.
- Supported optimization efforts in software engineering management for internal Microsoft teams.

Self Employed

Freelance Work • August 2012 - August 2013

- Supported startups in the Cincinnati and Columbus areas in various capacities; entry into tech incubators, course correction on flagging projects, et cetera.
- Technical assistant to computational chemistry lab at the University of Cincinnati (development in C/Python, code reviews, troubleshooting, bug fixes).
- Acted as expert witness for Raleigh-based company, helping to settle multi-million dollar lawsuit.

Northrop Grumman – Xetron

Software Engineer • June 2010 - August 2012

- Individual classified tasking in the realm of network security and software engineering.
- Responsible for multiple investigations into new reverse engineering targets.
- Drove customer satisfaction from Satisfactory to Outstanding while in a customer-facing position.
- Provided on-site and remote technical assistance to customers in technical and non-technical roles.

Software Engineer (Co-op) • March 2009 - September 2009

• Lead a small team in developing a custom automated testing framework.

Siemens PLM Software

Software Engineer (Co-op) • March 2007 – September 2007, March 2008 – September 2008

- Acted as go-between for software developers and customers; use cases, simple bug fixes, etc.
- Developed scalability tests for servers to estimate server usage for CAD software (NX, SolidEdge).
- Started development of a web front end for scalability tests.

Education

North Carolina State University • PhD in Computer Science: August 2013 – Present Research Assistant • Spring 2014 – Present

- Created stand-alone VM with introductory security exercises for online students.
- Research into Risk Based Attack Surface (RBAS) approach for locating vulnerable code.
- Published five conference papers, including several award winning submissions.

Teaching Assistant • Software Security - Fall 2013, Fall 2014

- Designed multiple penetration testing and secure design assignments for the class.
- Lectured on multiple occasions on software security topics to classes of 100+ students.

North Carolina State University • Master of Science in Computer Science: May 2016 • GPA: 3.87

Received Master's degree en route during PhD studies.

University of Cincinnati • Bachelors of Science in Computer Science: Graduated June 2010 • GPA: 3.7

Senior design project; a ranking, sorting, and categorization system for Twitter.

Skills/Achievements

- Languages: C, C#, Python, MIPS, PPC, batch/bash scripting, some Ruby/Rails, Java, Javascript.
- Data Technologies: SciPy, NumPy, Scikit Learn, D3.js, MSSQL, some R, SAS products.
- 1st Place Graduate Students Student Research Competition (SRC) at FSE/ESEC 2015.
- 3rd Pace Graduate Students SRC Grand Finals (included all winners of SRC's at all ACM conferences).
- Most Outstanding Co-op Computer Science Class of 2010.
- Marine Leadership Award for leadership in the classroom May 2008.