

Jared Smith

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PROFILE

- Honors Computer Science Major with minors in Mathematics and Physics
- Cybersecurity Researcher and Engineer at Oak Ridge National Laboratory
- Founder and Vice-President of HackUTK, my university's first Computer Security Student Organization
- Co-Author of publications (in progress) in Computer Science (2) and Physics (1)
- Past experience with Cisco, Legal Analytics firm, and extensive academic research
- Expert in Python and C, Proficient in C++, Java, JavaScript, Golang, Familiar with Haskell, Swift, and PHP

EXPERIENCE

- **Cybersecurity Researcher and Engineer (Intern), Oak Ridge National Laboratory, 8/2015 - Present**
 - Designing and implementing next-generation computer security applications in the areas of static/dynamic malware analysis, computer network defense systems, IoT device penetration testing, and ad-hoc vehicle network security.
 - **(Keywords: C, C++, Computer Networks, Malware, Pentesting, Python, Software Engineering, Threat Intelligence, Cryptography, Data Mining, Machine Learning, and Statistical Methods)**
- **Software Security Engineer (Intern), Cisco Systems, 1/2015 - 8/2015**
 - Built a binary image analysis tool in Python to detect and analyze security vulnerabilities in Cisco router firmware, improving image and vulnerability detection to 95% accuracy over the previous solution's 60% detection accuracy.
 - Implemented a robust caching algorithm and improved the code coverage of an existing Java XSS Auto-Sanitization Framework, reducing the overhead of sanitization of dynamic web content from 200x to 2x.
 - Performed a Red Team penetration test on the latest version of a widely used Github issue management web application written using NodeJS, AngularJS, and MongoDB, finding over 20 critical vulnerabilities which were then responsibly disclosed.
 - **(Keywords: Agile development, C, Python, Java, JavaScript/CoffeeScript, XSS prevention, Web Application security, Burp Suite, IDA Pro, Penetration Testing, PostgreSQL)**
- **Software Engineer (Intern), M-CAM Int'l, 8/2014 - 1/2015**
 - Implemented a proprietary genomic algorithm in parallel and optimized a 20k line code base for a dataset of nearly 85 million documents, resulting in a speed up in data processing from 10k documents in 7 days to 85 million in 40 days.
 - **(Keywords: Java, PostgreSQL, Hadoop, Eclipse IDE, Grid Engines and Supercomputers)**
- **Research Assistant, University of Tennessee, Knoxville, varying dates**
 - **Neuromorphic Computing Group, 5/2015 - Present**
 - (Keywords: Neural Networks, C++, Systems Programming)
 - **Unconventional Computation Group, 8/2014 - 2/2015**
 - (Keywords: C, Python, Neural Networks, Analog Computation)
 - **Center for Intelligent Systems and Machine Learning, 5/2014 - 6/2014**
 - (Keywords: Java, MySQL, Data Mining, Text Analysis)
 - **High Energy Particle Physics Group, 8/2013 - 5/2014, 6/2014 - 8/2014**
 - (Keywords: C++, Experiment Design, LabView)

EDUCATION

University of Tennessee, Knoxville
Major: Honors Computer Science

- CS GPA: 3.95, CUM. GPA: 3.47
- Minor(s): Mathematics, Physics
- Chancellor's Honors Program
- Engineering Honors Program
- Graduation Date: 12/2016

INVOLVEMENT

- Co-Founder of HackUTK, hackutk.com
- Winner in VandyHacks Fall 2015, Finalist in VandyHacks Spring 2015, and Technical at MediaWorks Hackathon
- Ambassador and Freshman Mentor in Chancellors Honors Program
- Habitat for Humanity Volunteer

PERSONAL PROJECTS

- Optimus, a proprietary media content transformation engine - built for a startup in Knoxville using Python and NodeJS
- Spontivity, a social events app - built the cloud infrastructure and backend in Python and Golang using Heroku, PostgreSQL, Redis, Flask, and more
- Freelance web developer, see marcusamos.com, utmoccktrial.com, hackutk.com
- See github.com/jaredmichaelsmith for more