John J. Seymour, III

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Research Interests: Machine Learning, Malware Analysis

Education

University of Maryland, Baltimore County (UMBC)

Ph.D. in Computer Science (Expected Fall 2017)
Graduate GPA: 4.0/4.0

M.S. in Computer Science (Fall 2014)
Thesis Title: Quantum Classification of Malware

B.S./B.S./B.A. *cum laude* in Computer Science/Mathematics/Philosophy (Fall 2011)
Certificate of General Honors
Undergraduate GPA: 3.70/4.00

Work Experience

ZeroFOX

Senior Data Scientist, September 2016 - Present

- Piloted ZeroFOX FoxThreats program for threat hunting on social media.
- Conveyed complex machine learning concepts to press and conference attendees.
- Interviewed and mentored new hires.

Data Scientist, September 2015 - September 2016

- Led development of SNAP_R, a machine learning based pen-testing tool to automate generation of individually tailored phishing messages on Twitter.
- Developed solution to detect money-flipping scam posts on Instagram.
- Created high-quality datasets for product offerings.

CyberPoint International, LLC

Student Intern, Summer 2015

- Recreated top Kaggle Malware Competition models and compared to models in the CyberPoint Machine Learning Model Training Pipeline.
- Added the Python xgboost library and the t-SNE dimensionality reduction algorithm to the Model Training Pipeline.
- Created algorithm and data structure vulnerabilities for DARPA STAC competition.

University of Maryland, Baltimore County

Graduate Research Assistant, UMBC DREAM Lab, January 2014 - May 2015

- Scraped urlquery.net for links to websites redirecting to exploit kits.
- Intercepted and recorded traffic to exploit kit landing pages for use in data analysis.

Graduate Teaching Assistant, August 2012 - December 2013

- Teaching Assistant for Network Security, Computer Security, Cryptography, Automata Theory, and Introduction to Object-Oriented Programming.
- Taught Metasploit, Kali Linux, and infosec theory to undergraduate students.

Graduate Research Assistant, UMBC Cyber Defense Lab, January 2012 - August 2013

- Designed, tested, deployed, and maintained LAMP stack to host government-funded gamification initiative for teaching high school students basic concepts in infosec.

Army Research Lab

Student Intern, Summer 2014

- Transformed satisfiability problems into problems the D-Wave SR10V6 could solve.
- Demonstrated and reduced bias in D-Wave chips using statistical techniques.