

John J. Seymour, III

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<https://github.com/seymour1/>

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RESEARCH INTERESTS

Malware Analysis, Machine Learning, Quantum Computing

EDUCATION

University of Maryland, Baltimore County (UMBC)

Ph.D. in Computer Science (Expected Spring 2017)

For list of publications, see <https://sites.google.com/site/jjseymour3/publications>

Graduate GPA: 4.0/4.0

M.S. in Computer Science (Fall 2014)

Thesis Title: Quantum Classification of Malware

Presented at DEFCON23, Summer 2015

B.S. *cum laude* in Computer Science (Fall 2011)

B.S. *cum laude* in Mathematics (Fall 2011)

B.A. *cum laude* in Philosophy (Fall 2011)

Certificate of General Honors

Undergraduate GPA: 3.70/4.00

WORK EXPERIENCE

CyberPoint International, LLC

Student Intern, Summer 2015 - Present

- 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 multiple Java programs with various algorithms and data structures for use in the DARPA Space/Time Analysis for Cybersecurity project.

Army Research Lab

Student Intern, Summer 2014

- Transformed satisfiability problems into problems the D-Wave SR10V6 could solve using ToQ, a D-Wave proprietary software.
- Demonstrated and reduced bias in D-Wave chips using Python, error correcting codes, and statistical techniques.

University of Maryland, Baltimore County

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

- Created Bash Scripts and Cron jobs to scrape urlquery.net for links to websites redirecting to exploit kits.
- Integrated VirtualBox, Wireshark, Bash and Python scripts, and Suricata to intercept and record all traffic to exploit kit landing pages.
- Published multiple papers on Exploit Kit classification and overgeneralization in malware classification.

Graduate Teaching Assistant, August 2012 - December 2013

- Teaching Assistant for Network Security, Computer Security, Cryptography, Automata Theory, and Introduction to Object-Oriented Programming.
- Introduced students to Metasploit/Kali Linux and theoretical aspects of cybersecurity.

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

- Designed, tested, deployed, and maintained the SecurityEmpire website and game.
- Administered Mercurial repository, managed Red Hat server with Apache HTTPD to host project, and developed server-side code using PHP and MySQL.

Pyxis Engineering/Applied Signals Technology

Associate Engineer, June 2009 - January 2010

- Designed, tested, and deployed a Training Request Management System using Java, Spring, HTML, CSS, Javascript, JUnit, MySQL, Apache Maven, and Apache Tomcat.