

Matthew Landen

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EDUCATION

Georgia Institute of Technology

Atlanta, GA

Ph.D. in Computer Science (Cybersecurity)

Since August 2017

NSF Graduate Research Fellow

\$34,000 / year, 3 years

Georgia Tech Presidential Fellowship

\$5,500 / year, 4 years

Advisor: Wenke Lee, PhD

University of Maryland, Baltimore County (UMBC)

Baltimore, MD

BS in Computer Science and Mathematics, Summa Cum Laude

May 2017

Meyerhoff Scholar

\$15,000 / year

RESEARCH EXPERIENCE

Georgia Tech, Institute for Information Security & Privacy (IISP)

Atlanta, GA

Graduate Student Researcher

August 2017-Present

Adviser: Wenke Lee, PhD

- Utilized machine learning classification provided by Scikit-learn to perform Android malware detection using extracted contextual features
- Experimented with Keras, a deep learning library for python applied to Android malware detection
- The second author on a paper accepted to ACSAC 2018

UMBC MAPLE Lab

Baltimore, MD

Undergraduate Student Researcher

November 2016-August 2017

Mentor: Marie desJardins, PhD

- Designed and implemented a hierarchical reinforcement learning algorithm using BURLAP java library
- Implanted R-MAXQ as a baseline to our approach
- Co-authored 2 workshop papers, RLDM, ICAPS Integrated Execution of Planning and Acting Workshop

National Institute of Standards and Technology

Gaithersburg, MD

Federal Pathways Researcher

May 2015-May 2017

Mentors: Michaela Iorga, Ph.D. and Dmitry Cousin

- Implemented a hash chain logging approach in a research cloud environment using java which has applications in information security and privacy-preserving digital forensics
- Engineered a user behavior model to differentiate between people and robotic agents using timing analysis of actions
- Developed a tool in C# that allows agencies to analyze the NIST cloud computing security architecture and see pertinent information in a variety of situations as well as visual trends

WORK EXPERIENCE

US Defense Intelligence Agency

College Park, MD

Student Intern

June 2014-August 2014

- Engineered and deployed a fully-functional Java web application to retrieve and parse email addresses into a mailing list project manager to email all software users with software updates and other useful information.
- Designed and engineered software to get digital certificate information from users on a website.
- Took lead on setting up a development environment for the Data Engineering team using software development tools such as Git, Maven, Virtual Box, and Vagrant

UMBC Human Resources Department

Baltimore, MD

Student Intern

June 2012-August 2012

- Developed a database for employee information along with designing a portion of the website

TECHNICAL SKILLS:

Programming Languages: Java, Python, C, C++, C#, Visual Basic, intel assembly, HTML, CSS,
Frameworks / Libraries: JavaScript, PHP, SQL, Latex
 Python – Keras, Sklearn, NumPy, Pwntools;
 Web – JQuery, AngularJS
Tools: Git, IDA Disassembler

PUBLICATIONS

Joey Allen, **Matthew Landen**, Sanya Chaba, Yang Ji, Simon Chung, Wenke Lee "Improving Accuracy of Android Malware Detection with Lightweight Contextual Awareness" In Annual Computer Security Applications Conference, 2018

Shawn Squire, John Winder, **Matthew Landen**, Stephanie Milani, Marie desJardins "R-AMDP: Model-Based Learning for Abstract Markov Decision Process Hierarchies" In the Multi-disciplinary Conference on Reinforcement Learning and Decision Making 2017, 2017

John Winder, Shawn Squire, **Matthew Landen**, Stephanie Milani and Marie desJardins "Towards Planning With Hierarchies of Learned Markov Decision Processes" In ICAPS-2017 Integrated Execution of Planning and Acting Workshop, pg 50-53, 2017

HONORS

NSF Graduate Research Follow	August 2017-Present
Georgia Tech Presidential Fellowship	August 2017-Present
Phi Kappa Phi Honors Society Member	April 2017-Present
Meyerhoff Scholar	August 2013-May 2017
President's List	August 2013-May 2017
National Honor Society	August 2011-May 2013

TEACHING EXPERIENCE

Graduate Teaching Assistant for Network Security at Georgia Tech August 2018 – December 2018

- Held office hours to answer students' questions about course projects and content

Teaching Fellow for Computational Thinking and Design August 2015–December 2016

- Selected to assist in teaching a freshman course focusing on retention for computing majors funded by a NSF grant
- Served as the senior teaching fellow my second year, managing the other student staff and the course Blackboard site including releasing assignments and creating rubrics
- Collaborated with the professor to create programming assignments, as well as the rubrics and solutions
- Assisted with programming assignments, graded assignments and held office hours for students

CONFERENCES & WORKSHOPS ATTENDED

Annual Computer Security Applications Conference	December 2018
USENIX Security and AI Networking Workshop	May 2018
CRA Grad Cohort Workshop for Underrepresented Minorities + Persons with Disabilities	March 2018
ACM Richard Tapia Celebration of Diversity in Computing	September 2017
The Multi-disciplinary Conference on Reinforcement Learning and Decision Making	June 2017

EXTRACURRICULAR ACTIVITIES

Theatre Productions September 2010-May 2017

References for Matthew Landen

Wenke Lee, PhD
Professor
School of Computer Science
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