

# Matthew Landen

Email: mlanden@gatech.edu

Website: matthewlanden.me

Cell: 410 660-7819

Github: <https://github.com/mlanden>

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## EDUCATION

Georgia Institute of Technology

Atlanta, GA

PhD in Computer Science (Cyber security)

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

Advisor: 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
- 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 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, PhD 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 in 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, MySQL, Latex  
 Python – Keras, Sklearn, NumPy; Web – Jquery, AngularJS  
**Tools:** Git

## 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
Mseyerhoff Scholar	August 2013-May 2017
President's List	August 2013-May 2017
National Honor Society	August 2011-May 2013

## TEACHING EXPERIENCE

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 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

USENIX Security and AI Ney	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
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## References for Matthew Landen

Wenke Lee, PhD  
Professor  
School of Computer Science  
College of Computing  
Georgia Institute of Technology  
404-385-2879  
wenke@cc.gatech.edu

Marie desJardins, PhD  
Associate Dean for Academic Affairs  
College of Engineering and Information Technology  
UMBC  
410-455-3967  
mariedj@umbc.edu

Michaela Iorga, PhD  
Senior Technical Lead  
Information Technology Laboratory  
National Institute of Standards and Technology  
301-975-8431  
michaela.iorga@nist.gov

Muddappa Gowda, PhD  
Professor  
Department of Mathematics and Statistics  
UMBC  
410-455-2431  
gowda@math.umbc.edu

Stacy Branham, PhD  
Lecturer  
Human Computer Interaction/IS  
UMBC  
410-455-8104  
sbranhan@umbc.edu