

# Matthew Landen

PhD Student

## CONTACT INFORMATION

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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 Fellow                | \$5,500 / year, 4 years  |
| University of Maryland, Baltimore County (UMBC) | Baltimore, MD            |
| BS in Computer Science and Mathematics 4.0 GPA  | May 2017                 |
| Meyerhoff Scholar                               | \$15,000 / year          |

## RESEARCH EXPERIENCE

|  |                           |
|--|---------------------------|
| UMBC MAPLE lab   | November 2016-August 2017 |
| Student Researcher   |                           |
| Mentor: Marie desJardins, PhD  |                           |
| <ul style="list-style-type: none"><li>Developed and implemented a hierarchical reinforcement learning algorithm, R-AMDP</li><li>Implanted R-MAXQ as a baseline to our approach</li><li>Co-authored 2 workshop papers, RLDM, ICAPS IntEx</li><li>Submitted a first-authored AAAI conference paper</li></ul> |                           |

|  |                   |
|--|-------------------|
| National Institute of Standards and Technology,  | May 2015-May 2017 |
| Federal Researcher, NIST   |                   |
| Mentors: Michaela Iorga, PhD and Dmitry Cousin   |                   |
| <ul style="list-style-type: none"><li>Implemented the hash chaining approach as a proof of concept in a research cloud environment. This procedure was embedded in a system to detect tampering in application log files and provide meaningful information to digital forensic investigators while also protecting privacy of users.</li><li>Engineered a user behavior model which calculates time differences between user events and performs statistical analysis on them to attempt to differentiate between a person and a robotic player</li><li>Developed a tool that allows agencies to analyze the cloud computing security architecture and see pertinent information in a variety of situations by creating reports about the information in spreadsheets .by way of a database</li><li>This tool also creates visualizations of the cloud security data that shows trends in the cloud security architecture</li></ul> |                   |

## WORK EXPERIENCE

|   |                       |
|---|-----------------------|
| Intern, US Defense Intelligence Agency  | June 2014-August 2014 |
| <ul style="list-style-type: none"><li>Engineered and deployed a fully-functional Java web application to retrieve and parse email addresses into a useful format that allowed the project manager to use an automated function in outlook to import everything into a distribution list and email the entire client group at once to provide software updates and other useful information.</li></ul> |                       |

- 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

Intern, UMBC HR Department

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, HTML, CSS, JavaScript, PHP, SQL, MySQL

**Frameworks / Libraries:** Python – Keras, Sklearn, NumPy; Web – Jquery, AngularJS

**Tools:** Git

## PUBLICATIONS

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 Fellowship  
Georgia Tech Presidential Fellowship  
Meyerhoff Scholar  
Presidents list  
National Honors Society

August 2017-Present  
August 2017-Present  
May 2013-May 2017  
August 2013-August 2017  
August 2011-May 2013

## TEACHING EXPERIENCE

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

- Freshman course geared towards retention in computing majors made possible by 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
- Worked with professor to create different programming assignments as well as the rubrics and solutions
- Helped grade assignments and led office hours for extra help

## CONFERENCES ATTENDED

CRA Grad Cohort Workshop for Underrepresented Minorities + Persons with Disabilities March 2018

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  
College of Computing  
Georgia Institute of Technology  
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