Matthew Landen

PhD Student

CONTACT INFORMATION

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EDUCATION

Georgia Institute of Technology		Atlanta, GA
PhD in Computer Science		May 2023
NSF Graduate Research Fellow		$34,000 / year, 3 years
Georgia Tech Presidential Fellowship		$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

RESERCH EXPERIENCE

UMBC MAPLE lab — November 2016-August 2017
Student Researcher
Mentor: Marie desJardins, PhD

- Developed and implemented a hierarchical reinforcement learning algorithm, R-AMDP
- Implanted R-MAXQ as a baseline to our approach
- Co-authored 2 workshop papers, RLDM, ICAPS IntEx
- First-authored AAAI conference paper, submitted

National Institute of Standards and Technology, — May 2015-Present
Federal Researcher
Mentors: Michaela Iorga, PhD and Dmitry Cousin

- 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.
- 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
- 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
- This tool also creates visualizations of the cloud security data that shows trends in the cloud security architecture

Skills: C#, SQL, Java

CONFERENCES

R-AMDP: Model-Based Learning for Abstract Markov Decision Process Hierarchies" In The Multi-disciplinary Conference on Reinforcement Learning and Decision Making 2017

TEACHING EXPERIENCE

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

- 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

WORK EXPERIENCE

Intern, US Defense Intelligence Agency June 2014-Augest 2014

- 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 to entire client group at once to provide 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 our 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:

-Experience programming in Java, Visual Basis, c#, python, -html/css/jquery , asp.net, SQL, php, . MySql, Git

HONORS

NSF Graduate Research Follow	August 2017-Present
Georgia Tech Presidential Fellowship	August 2017-Present
Meyerhoff Scholar	August 2013-May 2017
Presidents list	August 2013-August 2017
National Honors Society	August 2011–May 2013

EXTRACURRICULAR ACTIVITIES

Theatre Productions September 2010-May 2017

PUBLICATIONS

Matthew Landen, Shawn Squire, John Winder, Stephanie Milani, Shane Parr, Marie desJardins. Learning Models for Hierarchies of Abstract Markov Decision Processes. In *AAAI 2018.* Submitted.

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

References for Matthew Landen

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