Matthew Landen

PhD Student

CONTACT INFORMATION

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EDUCATION

Georgia Institute of Technology
Atlanta, GA
PhD in Computer Science
May 2023
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NSF Graduate Research Fellow \$34,000 / year, 3 years Georgia Tech Presidential Fellowship \$5,500 / year, 4 years

University of Maryland, Baltimore County (UMBC)

BS in Computer Science and Mathematics

4.0 GPA

May 2017

Meyerhoff Scholar

\$15,000 / year

RESERCH EXPERIENCE

Georgia Tech GTISC Lab

August 2017-Present

PhD Student

Mentor: Wenke Lee, PhD

 Classified Android apps as malware using sequence classification of android app events using neural networks

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-May 2017

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:

- -Application languages: Java, Visual Basis, c#, python, c++, c, x86 assembly
- -Libraries: Keras, BURLAP
- -Web programming: html, css, javascript, jquery, php, SQL, MySQL, asp.net
- -Tools: Git, Entity Developer, Microsoft office

HONORS

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

EXTRACURRICULAR ACTIVITIES

Theatre Productions September 2010-May 2017

PUBLICATIONS

Shawn Squire, John Winder, **Matthew Landen**, Stephanie Milani, Marie des Jardins "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

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 sbranhan@umbc.edu