Andrew Emmott

Machine Learning & Data Science
Anomaly Detection Specialist

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Education

2009–2011 **BS in Computer Science**, *University of Arizona*, Tucson, AZ, *3.7 GPA*.
Note: Also attended from 2000-2004 and received a Bachelor of Arts

2011–present **PhD in Computer Science**, *Oregon State University*, Corvallis, OR, *3.6 GPA*.
Artificial Intelligence and Machine Learning Group
ARCS Scholar 2011-2013
Target Graduation Date: December 2017

Research

A Meta-Analysis of the Anomaly Detection Problem

paper https://arxiv.org/abs/1503.01158

data/software http://ir.library.oregonstate.edu/xmlui/handle/1957/59114

description A thorough meta-analysis of the anomaly detection problem. Develops a large corpus of benchmarks which vary along many axes and analyzes the successes and failures of many algorithms in many contexts. The associated benchmarks are already in high demand among other researchers.

Experience

2012–2015 **Research Assistant**, *Oregon State University*, Corvallis, OR, Supported the DARPA I2O initiative ADAMS (Anomaly Detection At Multiple Scales)..

- Provided software development support for industry research partners;
- Developed the large test bed described in the above research paper;
- Developed an effective new algorithm for use in insider threat detection;
- A good description of the work is described in: http://www.cc.gatech.edu/ bader/papers/PRODIGAL-KDD2013.pdf

2013 **PhD Research Intern**, *Ebay Inc.*, San Jose, CA, Search Science Group.
Work entailed modeling and analyzing seasonal changes in user behavior relative to their search queries.

Volunteer Work

2013-present **Middle College Mentor**, *Springfield Public Schools*.
Details at: http://www.springfield.k12.or.us/middlecollege

2014-present **Computer Programming Instructor**, *Springfield Public Library*.
I run workshops that teach teens to code in Python using a Minecraft API.

Proficiencies

Programming Languages

- bash
- Python
- Java
- C
- Theano
- R

Machine Learning

- Anomaly Detection
- Deep Neural Networks
- Statistical Analysis
- Non-parametric Probability Models
- Feature Selection/Engineering