

Matthew W. Leeds

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Education

The University of Alabama, Tuscaloosa, AL

August 2013 — May 2017

- B.S. in Computer Science and Applied Mathematics
- Honors College
- Computer-Based Honors Undergraduate Research Program
- The Mallet Assembly Honors Residence Program

Honors and Accolades

- National Merit Finalist
- University of Alabama Dean's List, Fall 2013 and Fall 2015
- University of Alabama President's List, Spring 2014
- Computer-Based Honors Fellowship Scholarship Recipient

Professional Skills

- Proficient in using linux, git, bash, vim, gdb, valgrind, and autotools
- Significant experience in Linux desktop technologies: Flatpak, GLib, GObject, etc.
- Languages: Fortran, Java, JavaScript, Go, and especially C/C++ and Python
- Interests in CS: cryptography, machine learning, blockchain, and systems programming

Publications

- Matthew Leeds, Miclain Keffeler, and Travis Atkison, “*Examining Features for Android Malware Detection*” accepted to SAM '17 conference, April 2017
- Matthew Leeds, Miclain Keffeler, and Travis Atkison, “*A Comparison of Features for Android Malware Detection*” accepted to ACM SE conference, March 2017
- Matthew Leeds and Travis Atkison, “*Preliminary Results of Applying Machine Learning Algorithms to Android Malware Detection*” accepted to CSCI conference, December 2016

Work Experience

Software Engineer, *Endless Solutions*

June 2017 — Present

- Improve Endless OS, a Linux distribution designed for limited Internet connections
- Contribute significantly to Flatpak and OSTree upstream
- Debug and deploy support for offline updates in Endless OS

Software Engineering Intern, *Red Hat*

May 2016 — May 2017

- Utilize gdb, GTK+ Inspector, and other tools to debug and improve software
- Contribute to GNOME Builder, an IDE, and Flatpak, a tool for packaging containerized desktop apps
- Participate in free software communities on IRC and GitHub

Lab Manager, *Computer-Based Honors Program*

March 2014 — May 2017

- Manage a computer lab with Windows, OS X, and Linux machines
- Solve technical problems for students involved in undergraduate research
- Administrate and monitor servers providing various services

Research Experience

- Undergraduate Researcher, *University of Alabama* January 2016 — May 2017
- Worked under Dr. Travis Atkison in the Computer Science department
 - Trained a neural network to classify Android malware using TensorFlow
 - Wrote Bash and Python scripts to gather, process, and graph data
- Undergraduate Researcher, *University of Alabama* September 2014 — April 2015
- Worked under Dr. Jeremy Bailin through the Computer-Based Honors Program
 - Automated the creation of synthetic images of simulated galaxies using Python scripting
 - Solved technical issues with running the SUNRISE radiative transfer code on a supercomputer
- Undergraduate Researcher, *Clemson University* June 2014 — July 2014
- Developed a linear programming solver in C++
 - Built a web interface for modeling heterogeneous networks
 - Utilized git, L^AT_EX, PHP, JavaScript, and other technologies

Leadership Experience

- Vice President, *UA Association for Computing Machinery* January 2016 — December 2016
- Coordinate with other ACM officers to plan meetings, workshops, and events
 - Lead workshops on git and gdb
- Delivery Lead, *Code for Birmingham* May 2015 — March 2016
- Monitor and coordinate teams working on CFB projects
 - Communicate with new and potential members
 - Research potentially redeployable projects
- Brigade Captain, *Code for Tuscaloosa* July 2015 — January 2016
- Lead a team of volunteers working on open source civic technology
 - Contribute to software projects on GitHub
 - Advocate for open data in city government