

Elijah Grubb

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RESEARCH INTERESTS

Systems, Security, Formal Methods, and Cryptography.

EDUCATION

Ph.D. Computer Science
University of Maryland

2018 – Present
College Park, MD

B.Sc. Computer Science
University of Utah

2014 – 2018
Salt Lake City, UT

RESEARCH EXPERIENCE

Undergraduate Research Assistant
University of Utah, School of Computing

September 2016 – August 2018
Salt Lake City, UT

With Professor Eric Eide as a part of the Flux Research Group, September 2017 – August 2018

- **Xsmith**

Developed tool for testing correctness of volatile variables and their handling in modern C compilers using the Valgrind instrumentation framework.

- **Emulab: An Integrated Experimental Environment for Distributed Systems and Networks**

Worked to bring Docker support to Emulab, a network testbed for controlled experiments in computer science. Tested methods for maintaining the features of Docker's lightweight containers while integrating Emulab's debugging and deployment capabilities. Implemented an automated process for installing Emulab's "client-side" software on Alpine Linux Docker images. Publication on project at CSET 18.

With Professor Feifei Li as part of the Data Group, September 2016 – May 2017

- **STORM: Spatio-Temporal Online Reasoning and Management of Large Data**

Responsible for systems bringing in large amounts of data from Twitter. Worked on a generic import function into the application to let others upload their own spatio-temporal data.

- **Compass: Spatio-Temporal Sentiment Analysis of US Election**

Applied sentiment analysis systems to a massive data store of tweets to find political tweets and assign them to their appropriate county.

PUBLICATIONS

Supporting Docker in Emulab-Based Network Testbeds.

D. Johnson, **E. Grubb**, E. Eide.

In *Proceedings of the 11th USENIX Workshop on Cyber Security Experimentation and Test (CSET 18)*, Baltimore, MD, August 2018.

PROFESSIONAL EXPERIENCE

Software Engineering Intern

Qualtrics

May 2017 – August 2017

Provo, UT

- Built a full stack application from scratch based on engineering needs
- Participated in thorough code reviews of several projects
- Designed a scalable system architecture from the ground up

Technology Summer Analyst

Goldman Sachs

June 2016 – August 2016

Salt Lake City, UT

- Designed and built a backend application based on corporate needs
- Worked with full time engineers to build efficient RESTful APIs quickly
- Leader for younger interns in the product development life cycle

Software Engineer Intern

Spillman Technologies

March 2015 – May 2016

West Valley City, UT

- Developed new technology at the heart of Spillman software
- Fixed customer-reported bugs found inside of the core system
- Coordinated with other developers to arrive at viable solutions

TEACHING EXPERIENCE

Teaching Assistant

- **Organization of Programming Languages** (University of Maryland – CMSC330), Fall 2018
- **Database Systems** (University of Utah – CS5530), Spring 2017

AWARDS & HONORS

- 6x Dean's List, University of Utah
- Top 4 Finish, Internal Goldman Sachs Hackathon, Summer 2016
- 3rd Place, University of Utah Hackathon co-hosted by U of U ACM, Fall 2015
- Honors at Entrance Academic Scholarship, University of Utah, Fall 2014
- AP Scholar with Distinction, The College Board, Summer 2014
- Eagle Scout, Boy Scouts of America, Spring 2014