

# EMERSON FORD

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Fourth-year CS student at the University of Utah interested in infrastructure and low-level systems.

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## EDUCATION

### University of Utah

Double BS in Honors Computer Science & Mathematics, Statistics Emphasis

May 2016 – December 2021 | GPA: 3.7 / 4.0

**Relevant Course Work:** Adv Operating Systems, Operating Systems, Programming Languages, Computer Networks, Algorithms, Models of Computation, Intro to Data Science, Intro to Probability, Parallel Computing\* (\*currently enrolled)

**Skills:** Python 3, C, C++, MySQL,  $\text{\LaTeX}$ , Ruby, Rust, Java, Bash, Git, Mercurial, Docker, Docker Compose, AWS S3 & Lightsail, Node.js, Thrift, RPC, asynchronous/event-driven programming, stateless services, networking

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## EXPERIENCE

### University of Utah – Center for High Performance Computing

Student Intern | Salt Lake City | May 2017 – Present

- Prototyped OpenStack, Emulab, and OpenNebula for the development of a HPCaaS environment.
- Developed several Python 3 report scripts to analyze the state of our user base and storage clusters.
- Implementing Puppet and Foreman to fully automate the new host provisioning workflow on the SLATE research project.

### Facebook

Production Engineer Intern | Seattle | Summer 2018 & Summer 2019

- Worked with the Storage Platform team which manages all storage hardware at Facebook.
- Developed two services from scratch in Python 3 to automate stress testing of storage nodes and to manage the lifecycles for all hosts powering Facebook's Scuba service.
- Helped and mentored other interns in learning Facebook's tools and infrastructure.

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## LEADERSHIP

**HackTheU** | Chief Director | May 2017 – December 2019

Organized and managed a team of 20 that hosts Utah's largest hackathon with over 300 attendees in 2019 at the University of Utah. Administrated the non-profit and 501(c)(3) status of the organization.

**School of Computing Undergraduate Advisory Committee** | Member | May 2017 – Present

Host student events and serve as the student voice for the School of Computing.

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## PROJECTS / ACTIVITIES

- Reproduced cache hit/miss timing differences over RDMA as detailed in the NetCAT paper.
- Developed a Lisp-like language with parsing, types, and classes in Racket for Programming Languages.
- Linux character device kernel modules and a custom sbrk implementation in xv6 for Operating Systems.
- Basic reliable transport protocol, load balancer, and malware filtering proxy for Computer Networks.
- Second place winner of the 2019 Lucid Software Capture the Flag competition.