ISAAC DAVIS

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SUMMARY

Software engineer with focus in distributed systems and backend services. Enthusiasm for software engineering as a technical, people-oriented and holistic profession. Designs and writes software with scalability, robustness, and debuggability in mind. Works to create team and company culture of openness, collaboration, mentorship, and technical rigor.

SKILLS

Programming Languages: *Fluency*: C, Rust, x86 asm, Go, Node.js, Python, Bash, Java *Familiarity:* C++, OCaml
Software and Tools: POSIX API, ZooKeeper, Prometheus, Grafana, Git, DTrace, gdb, Make

EXPERIENCE

JOYENT, INC San Francisco, CA
Cloud services provider offering enterprise-oriented object storage and compute platform 2017-Present
Software Engineer — Object Storage (2018-Present)

- For Joyent's next-generation object storage product, designed and wrote Rust library and accompanying Rust ZooKeeper client for interfacing between replicated Postgres cluster and metadata API server. All user requests rely on this library.
- Implemented scalable turnkey metrics and monitoring services for cloud orchestration layer to replace ad-hoc infrastructure
- Engineering recruitment lead. Steered design and introduction of new recruitment and interview process; achieved mature recruitment pipeline with multiple candidates interviewed weekly. Led work to promote Joyent in the job marketplace.
- In charge of engineering lab infrastructure. Install and maintain servers and network switches in lab datacenter.
- Contribute to open-source software and provide mailing list support to open-source community

Software Engineer Intern — OS Kernel (2017)

- Researched container scalability, working across illumos kernel and userland Node.js services. Increased viable number of containers on a single host from 1,000 to 8,000 by improving algorithm design and resource allocation.
- Redesigned and reimplemented illumos kernel ID space library for sublinear time and space complexity

ANALOG DEVICES, INC Chelmsford, MA
Leading manufacturer of embedded computing hardware and digital signal processors 2016
Software Engineer Intern — Emulators and Development Tools

- Unified previously separate power-on self-test programs for the ADSP-SC573 processor's ARM and SHARC cores to simplify and automate production testing
- Wrote command-line application for viewing and editing a processor's memory while a debug session is in progress. This application demonstrated feature feasibility to commercial customers.

BROWN UNIVERSITY DEPT OF COMPUTER SCIENCE Providence, RI
2015-2018

Head Teaching Assistant — Operating Systems (CS167/CS169) (2018)

- Responsible for logistics and daily administration of course with 60 undergraduates. Managed staff of five.
- Steered course development. Coordinated TA-student mentorship program. Managed assignments, lectures and grading.

Teaching Assistant — Various Courses (2015-2017)

- Member of TA staff for Operating Systems, Algorithms/Data Structures, and Introductory Programming courses
- Held office hours and help sessions and formally mentored students
- Wrote student-facing documentation, wrote reference implementations of assignments for TA use when grading
- Wrote software suite for grading and testing student submissions

EDUCATION

BROWN UNIVERSITY Providence, RI
BS, Computer Science 2014-2018
Coursework: distributed systems, operating systems, security/exploitation, programming language theory, compilers, algorithms

ADDITIONAL INFORMATION

Volunteer Work: Middle-school and community teaching assistant for IntraCity Geeks, a City of Providence-funded organization focused on increasing technology education in under-served communities

Interests: Jazz drumming, audio recording/mixing/editing, cycling