Joshua Dale Mottaz

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Skills

- Proficient in Python, Linux, C, Javascript, Ansible, Docker, Git
- Experience with SQL, Java, TCL, NodeJS, Django, Apache Cassandra, Apache Kafka, Terraform, SVN, SolidWorks, LaTeX, Sphinx

Employment

Canary Inc. - Senior Software Engineer   September 2016 - Present

- Designed and crafted Canary's Google Home integration using API.AI and NodeJS, facilitating device status querying and interaction through either voice or Google assistant.
- Identified issues throughout our highly parallel video processing pipeline. Built a command-line visualization tool from scratch to troubleshoot incorrectly labeled metadata for a system processing hundreds of thousands of videos a day. Fixed numerous race conditions in the same pipeline caused by careless parallelization and read-replica database lag. Profiled and optimized queries, resulting in a net reduction of millions of queries per day on RDS instances. Built out Django API as necessary.
- Added daylight savings support to automatic mode change scheduling, based on the physical device location.

Luminus Networks - Software Engineer   September 2015 - June 2016

- Created and maintained RESTful Python microservices for the Luminus network monitoring architecture. Designed a system-wide authentication system with a Cassandra back-end and built out the service SDK to support it. Worked on every segment of the pipeline: containerized services with Docker, wrote playbooks for Ansible deployment, and automated builds with Jenkins.

Cray Inc. - Software Engineer   June 2011 - September 2015

- Hardware Services & OS – Wrote monitoring daemons in C for Cray blade controllers, configured log management and forwarding with rsyslog, and added features to existing tools such as the hardware inventory checker.
- Cray Management Software – Created a scalable CLI tool in Python for first-line diagnostic dumps, collecting from all areas of the system, with an extensive plugin developer API fully documented with Sphinx. As of leaving, tool was available on all new Cray supercomputers and in use constantly for both internal diagnostics and customer triage.

RealNetworks - Software Engineer Intern   June 2010 - September 2010

Education

B.S., Computer Engineering   June 2011

- University of Washington, Seattle, WA

Side Projects

- Built out a project for configuring and AWS and launching Minecraft servers cheaply and easily on AWS spot instances, complete with automated world backup to and restoration from S3. Provisioning and configuration was done using Terraform and Ansible, with backup and cron scripts written in Bash and Python.
- Wrote a library in C with Python bindings for creating and editing Minecraft worlds. Provided a high-level interactive interface to easily edit thousands of blocks without worrying about underlying data structures or world chunk boundaries. No longer in active development.

References and Github available upon request.