Sam Roquitte

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Education

Georgia Institute of Technology | Atlanta GA *August 2018 – May 2022*
Bachelor of Science in Computer Science
Honors: Summa Cum Laude

Experience

Blue Origin (blueorigin.com) | Seattle, WA *February 2023 - Present*
Software Development Engineer II, New Glenn Embedded Software

- Led HLSR verification effort for the Main Flight Computer to support the first flight of New Glenn
- Refactored Blue Ring software app stubs to allow them to be published and used for testing by external teams
- Led system-level implementation of loss of communication function to enable integrated tanking tests
- Took ownership of integrating a new hardware component including writing C++ IO device drivers
- Responsible for integrating autonomy models for each release & ensuring proper sensor/actuator mappings
- Prototyped CBIT implementations to continuously verify that devices are working properly, wrote unit tests for PIL
- Fixed CMake files to solve linker errors on a new project allowing team to build binaries to test with
- Tested key embedded controller functionality in HIL lab to verify requirements are being met

Redfin (redfin.com) | Seattle, WA *July 2022 - November 2022 (layoff)*
Software Development Engineer I, Site Reliability Engineering

- Replaced a high-toil system with a system that includes tests, CI pipeline, better monitoring (statsd, Graphite, Grafana), alerting, and documentation. Reduced production errors in this service by 26%
- Upgraded tool built by a Tech Lead to be production ready (tests, CI, secrets in AWS for scalability)
- Joined another team's on-call rotation to support while staffing issues were present, tuned alerts to reduce load

Georgia Tech Space Systems Design Lab (ssdl.gatech.edu) | Atlanta, GA *Spring 2022*
Undergrad Research, Ground Station Operations

- Wrote a Python application with ZMQ to connect three independent ground stations to mission operation center
- Operators no longer need to be physically present at a ground station to uplink/downlink data, saving hours of travel
- Assisted with telemetry monitoring and testbed engineering for two cubesat missions, GT-1 & Lunar Flashlight

GT CS2200: Systems & Networks | Atlanta, GA *Fall 2019 - Fall 2021*
Head Teaching Assistant, Fall 2020 - Fall 2021 (3 semesters)
Teaching Assistant, Fall 2019 - Spring 2020 (2 semesters)

- Built automated grading tools in Python which modify & run student code and then examine the internal processor state to ensure correct execution occurred. Provided students instant, valuable feedback and saved grading time
- Designed new projects to teach students about system architecture and networking concepts (C, assembly)
- Restructured team leadership, adding two lead positions, resulting in fewer errors in projects and homeworks
- Hired new teaching assistants each semester and managed 18 through the semester
- Conducted individual meetings with each TA to assist with personal growth and provide feedback

Skills

General: C/C++, Python, Bash/zsh, Java, Jinja2, CMake
Web: Javascript, NodeJS, HTML, CSS, React, MongoDB, MySQL, GraphQL, Redis, NGINX
Platforms & Networking: Linux (Debian, RHEL), Docker, Terraform, Ansible, Jenkins, Kubernetes

Projects

Home Lab (hosts personal projects, portfolio) *2013 - Present*

- Built up a 25U rack with custom built servers and networking equipment
- Running a microservice architecture with all services running containerized across hosts
- All services behind NGINX reverse proxy allowing for increased security with SSL certificates

Hackathon Projects:

- BuzzBasket (HackGT, 2020): **Winner: NCR 1st prize**
- HouseUP (HackGT, 2019): **Winner: Wayfair 1st prize, housing inequality**
- eL (MakeHarvard, 2019): **Winner: Sunstone prize**