Adam Gaia

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Work Experience

Software Engineer - Sarcos Robotics November 2019 (intern) to present (full time)

- Robot Service Manager
  - Built and maintained an on-robot daemon that provided a REST API for interacting with services running on the robots
  - Reduced the firmware update process from 1 hour to 10 minutes by building a CD pipeline distribute firmware to robots without human interaction
  - Worked closely with test engineers to create internal tools for starting/stopping robot operation
  - Used websockets to stream filtered runtime logs to robot deploy stations during robot operation
  - Created and containerized on-robot services as dockerized python apps
  - Wrote/tested/debugged python code
- Reduced the on-robot team's main codebase CI runtime from 40 minutes to 5 minutes by removing redundancy and running jobs in parallel
- Created a pipeline to transfer 100s of GB runtime logs from the robot to cloud storage after operation
- Worked with test engineers to debug and resolve robot bring-up issues on the test floor
- Wrote Ansible scripts to provision robot deploy stations (linux computers)

Scientific Computing Intern - University of Utah August 2017 to November 2019

- Parallelized a post-processing script, reducing run-time from 18 hours to 3 minutes with 400+ GB input files
- Created Bash scripts to automate the queuing of remote simulations. Added automatic job error feedback
- Used Linux command line to run simulations on remote high-performance computing centers

Computer Science and Engineering Projects

- **4-Node Raspberry PI Server:** *Headless home server built by linking 4 raspberry pi (linux) computers*
  - Wrote Ansible scripts to provision nodes and automate server administration tasks
  - Used docker to run containerized applications on the server
- **Spreadsheet Application:** *Semester-long project to build an application from scratch in C#*
  - Used modular programming and MVC to combine individual components into a fully developed application
  - Used hash maps to keep track of cell dependencies to optimize formula calculation speed
  - Received an A on the project
- **Ping-Pong Ball Launcher:** *Project goal was to hit targets ranging between .5-1 meter away*
  - Microcontroller set firing velocity, launcher position, and launch angle
  - Processed an overhead image to find target location
  - 8th place in timed competition (out of 100)

Education

B.S. Computer Science - 3.2 GPA on hold
University of Utah

- Object-Oriented Programming
- Software Practice 1 and 2
- Algorithms and Data Structures
- Engineering Probability and Statistics
- Professional Communication for Engineers
- Scientific Computing
- Computer Organization and Architecture
- Calculus 1, 2, and 3
- Linear Algebra and Differential Equations
- Advanced Programming for Comp. Design Problems

Skills

- **Primary Languages:** Python, C++, Bash
- **Secondary Languages:** Rust, C#, Java
- **Tools:** Git, unit tests, integration tests, CI/CD, Docker, Unix/Linux, code review, LaTeX
- **Soft Skills:** Outgoing team player, time management, oral and written communication skills