Calen Robinette

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EDUCATION

Master of Science in Computer Science
Georgia Institute of Technology • Atlanta, GA • 2021
• Student Advisory Committee member
• Relevant Coursework: High-Performance Computing, Distributed Computing, Graduate Algorithms, Graduate Operating Systems

Bachelor of Science in Mathematics
Portland State University • Portland, OR • 2017

EXPERIENCE

Graduate Teaching Assistant
Georgia Institute of Technology **June 2020 – May 2021**
• Mentored more than 300 students each term, in collaboration with other TAs, for the High Performance Computer Architecture course taught by Milos Prvulovic.
• Reduced average project grading time by over 20% by creating a suite of grading tools in Python that will be used by future TAs.
• Acted as a mentor for my cohort, assisting with code review in C++, and establishing a respectful learning environment.

Intern
Citrine Informatics **October 2017 - June 2018**
• Automated the downloading of articles from multiple publication sites by building command-line tools with Python.
• Extracted data from 27 research papers using Tabula, generating thousands of data points to aid in building a library of materials data for use in training machine learning models.

PROJECTS

Simplified Distributed File System
• Designed and created a distributed file system using gRPC and Protocol Buffers to implement several file transfer protocols, such as: Store, Fetch and Delete.
• Utilized these file transfer protocols to incorporate a weakly consistent synchronization system in order to automatically update the server and all other clients upon any changes in files in any clients system.
• Ensured that the synchronization system between multiple clients and single server updated asynchronously to prevent any failures of the overall system.
• Analyzed how this system is horizontally scalable, and how this could further reduce failure rates.

Performance of Multi-Core Processors
• Measured the time and IPC performance increases of multi-core processors, using the results to analyze the performance of different cache management strategies.
• Developed code to measure the different cache miss types for both read and write calls on a multi-threaded system.

SKILLS

Languages: C++, C, Python, Java

Technologies: Git, Github, Linux, Virtual Machines, gRPC, Pandas, OpenCV, CUDA, OpenMP