Mitchell Gray

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Education

Georgia Tech, Atlanta, GA **Jan 2025 – Aug 2026**
Master's of Science, Computer Science *Machine Learning*

Cornell University, Ithaca, NY **Aug 2020 – May 2024**
Bachelor's of Science, Computer Science *30 Graduate Credits*
Minor, Operations Research Information Engineering *Deans List: FA 2022, FA 2023, SP 2024*

Relevant Coursework: Applied High-Performance and Parallel Computing · Distributed Computing · Cloud Computing · Systems Programming · Info Networks · Databases · Operating Systems · Software Testing · AI

Technical Skills

Languages: C++ · C · Python · SQL · Java · Bash · Rust
Software & Tools: Cloud Platforms · Microservices · REST · Databases · Containerization · Container Orchestration · CI/CD · Source Control · Dependency Managers · Build Systems · Unit Testing · Python Data Analytics · BI

Relevant Work Experience

Oracle **June 2024 – Present**
Software Developer I | **C, Java, PL/SQL, OracleDB, Raft** *Redwood City, CA*
- Adding new features and improving functionality of Shard Replication as part of the Globally Distributed Database's Raft Replication team · Writing Distributed Systems code in **C**, **Java**, and **PL/SQL** · Unit-Testing large-scale software.

Gecko Robotics **May 2023 – Aug 2023**
Software Engineer Intern | **C++, Python, CMake, C, Google Cloud, CI/CD** *Pittsburgh, PA*
- Worked on Robot Controls team · Revamped Robot & Data Acquisition emulators · Implemented new communications protocol · Wrote code for an asynchronous distributed system · Client/Server TCP networking · Replaced Visual Studio build-system with **CMake** · Added emulator support for calibratable data · Integrated **Github Actions** and **Poetry**.

CMU-Software Engineering Institute **May 2022 – May 2023**
DevOps Engineer Intern | **Python, Rust, Bash, Neo4j, Docker, Kubernetes, CI/CD** *Pittsburgh, PA*
- Updated and created **Gitlab CI** pipelines · Developed **Python**, **Rust**, and **Bash** code · Created **REST API** data visualizations · Used **ArgoCD** to deploy **AWS EKS** cluster · Improved efficiency of the company by using **Python**, **Neo4j**, **NeoDash**, and the PageRank algorithm to create metrics / long-term documentation.

Cornell University **Aug 2022 – May 2024**
Teaching Assistant & Head Proctor | **Java, Python, SQL** *Ithaca, NY*
- Received the Course Staff Exceptional Service Award and was nominated twice · Created and led review sessions for hundreds of students · Taught Databases, Object Oriented Programming, and Physics Lab · Held class sections weekly.

Research

ADOPT: Adaptively Optimizing Attribute Orders | ***Java, AWS*** | *Github* | *VLDB* **Jan 2022 – May 2024**
- Paper accepted and presented at **VLDB 2023** · Worked on transforming the query engine into a **distributed query engine** · Created dynamic data visualizations for the ADOPT query engine using **Java**, JavaFX, and GraphStream.

Projects

Distributed Unit Testing (SPEED) | Masters Project | ***Java, Cloud*** | *Github* | *BOOM* **Aug 2023 – May 2024**
- 1 of 44 projects selected for BOOM 2024. My team and I created a Scalable Platform for Efficient Execution of Distributed testing. The fault-tolerant system contains a leader node that orchestrates worker nodes that run **JUnit** tests on **Java** code. The worker nodes send test results to the controller. Test results are shown in the frontend.

Sharded Key Value Store (KVS) | Distributed Computing | ***Java, Paxos, 2PC*** | *Github* **Jan 2023 – May 2023**
- My partner and I made a sharded transactional KVS that uses **Paxos** for replication and **2PC** for multi-key updates. We implemented an Exactly-once RPC protocol on an asynchronous network, a primary-backup protocol, Paxos, and 2PC.

Cornell Meetup | Cloud Computing | ***Azure, CosmosDB, Python, WebDev*** | *Github* | *BOOM* **Aug 2022 – Dec 2022**
- 1 of 32 projects selected for BOOM 2023. My partner and I created a social media web app that allows users to create groups, chat with friends, and see where their friends are when on campus. Accounts details were obfuscated and salted.

Organizations

Engineering Entertainment Design Club | *Lead Programmer & Secretary* | *Club* **Aug 2022 – May 2024**
- Created entertainment robots · Worked on our website · Led projects and mentored all software teams, over 20 mentees.

Cornell Tradition Fellowship | *Fellow* | *Fellowship* **Aug 2020 – May 2024**
- Contains $< 4\%$ of all students · Keep good grades · Work and volunteer during the school year · Do 100+ hours of each.