David Calderon

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| **Education** | | | | |
| **Georgia Institute of Technology (Atlanta, GA)** | | August 2022 – December 2024 | | |
| * Senior, B.S. in Computer Science; Threads: Systems/Architecture and Information Internetworks; GPA: 3.92 * Relevant Coursework: Data Structures and Algorithms (Java), Advanced Computer Architecture (C++), Operating Systems (C), Computer Systems/Networking (C), Database Implementation (C++), Grad. Machine Learning (Python) | | | | |
| **Work Experience** | | | | |
| **Google: Software Engineering Intern (Sunnyvale, CA)** | | Summer 2024 | | |
| * Provided insight into Google’s server cooling patterns and statistics for DIMM components, by creating a data processing and analysis pipeline, using Flume Pipelines and C++. * Created a dashboard with 15 data views for various DIMM metrics, each which displays aggregated information across Google’s millions of servers over a 3-year (and gradually increasing) window, using SQL and dashboarding tools. * Modified data pipelines and dashboard queries based on adapting requirements to ensure final end-user satisfaction. | | | | |
| **Amazon: Software Development Engineer Intern (Austin, TX)** | | Summer 2023 | | |
| * Doubled average ad targeting affinity values for Amazon Audio services by creating new algorithm in AWS Lambda with Java for categorizing audience insight data, for improved ad targeting services. * Increased number of insights used for data gathering/dashboard population by 25x by communicating with internal API team for best usage of API; created Amazon S3 services to cache collected data into CSV files for data analysis. * Researched and implemented additional features, such as filtering of low-relevance data, building feature flags for insight API requests, and logging of formatted data for more informed development decisions. * Initiated research to create word vectorization deep learning model for automatically categorizing unseen insights. | | | | |
| **Organizations** | | | | |
| **RoboJackets: RoboNav Team - Software Lead (from April 2023)** | | | September 2022 - Present | |
| * Led software sub-team of 20 members to develop the software for a fully functional Mars rover, which competed in the international University Rover Challenge in 2024, set to compete again in 2025. * Built various ROS2 C++ packages/nodes for image detection, hardware control, and autonomous navigation. * Helped train new RoboJackets members in 2023 and 2024 on software curriculum (C++, ROS2, robotics theory). * Maintaining a project board, CI Pipeline, and documentation relating to training, setup and system functionality. | | | | |
| **GT WebDev: Project “DegreeActuallyWorks” – Software Developer** | September - December 2022 | | | |
| * Worked on software dev team for a more approachable design for Georgia Tech’s degree planning service/software. * Used Figma for visual designs, UI in HTML/CSS, and full-stack logistics with React, MongoDB, Express, NodeJS. | | | | |
| **Technical Projects** | | | | |
| **Class Projects (not comprehensive)** | | | | 2024 |
| * Operating Systems (C): Stack Backtrace, Virtual Memory Optimization, Custom Process Scheduler, System Implementation of Mutexes and Multi-Thread Processing, Custom Login and File System, in MIT’s xv6 OS. * High Perf. Comp. Arch. (C++): Multi-Level Cache Sim, Tomasulo’s Algorithm Sim, Cache Coherence Sim | | | | |
| **Stock Trading Simulation –** [**https://stock-trading-simulation.herokuapp.com**](https://stock-trading-simulation.herokuapp.com) | | | | Spring 2022 |
| * Developed a 5-page website to allow users to trade artificial stocks with real-time market values, add friends and trade with them, and track gains in investment, using ReactJS, MongoDB, NodeJS, and Express. * Used an external stock price API and optimized to minimize calls to it by caching data in the MongoDB database. | | | | |
| **Super Metroid Game Recreation - youtube.com/watch?v=va7BnZfb\_rY** | | | | Fall 2021 |
| * Recreation of Nintendo’s 1994 game “Super Metroid” using C# and the Unity game engine. * Developed modular scripts for game components and defined their interactions to allow for game functionality. | | | | |
| **Skills/Interests** | | | | |
| **Technical:** C, C++, Java, C#, Python, SQL, HTML/CSS/JavaScript, NodeJS/ExpressJS, MongoDB, ReactJS, Angular  **Languages:** Proficient in English and Spanish (read/write/speak) | | | | |