

# David Calderon

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## Education

### Georgia Institute of Technology (On-Campus: Atlanta, GA)

August 2022 – December 2024

- Senior, B.S. in Computer Science; Threads: Systems/Architecture and Intelligence; GPA: 3.92
- Relevant Coursework: Data Structures and Algorithms (Java), Software Engineering (Java), Advanced Computer Architecture (C/C++), Operating Systems (C), Computer Systems/Networking (C), Machine Learning (Python)

## Work Experience

### Google: Software Engineering Intern (Sunnyvale, CA)

May - August 2024

- Created a data processing and analysis pipeline to track DIMM cooling statistics using MapReduce/Flume, C++.
- Optimized data processing and display to accommodate 16 data panels simultaneously, each which displays information about Google's millions of servers over a 3-year (and gradually increasing) window.

### Amazon: Software Development Engineer Intern (Austin, TX)

May - August 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 2500% 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.

### GT Aerial Robotics and Experimental Autonomy Lab: Undergrad Researcher

May 2023 – December 2023

- Researched and developed a solution to enable the lab to have drone state control via behavior trees/state machines.
- Involved developing packages in ROS2 (Humble) and C++ on Ubuntu 22.04.

## Organizations

### RoboJackets: RoboNav Team - Software Lead (from April 2023)

September 2022 - Present

- Leading software sub-team of 20 members to develop the software component of a fully functional Mars rover.
- Built various ROS2 packages/nodes (in C++) to accomplish tasks such as tag detection, state control, and navigation.
- Currently maintaining a project board, CI Pipeline, and documentation relating to 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

### Personal Site – <https://david-calderon.herokuapp.com>

Summer 2022

- Static application with Angular that focuses on CSS and JS styling and animation; presents projects and biography.
- Features information about projects I have worked on in the past for people to view my professional experience.

### Stock Trading Simulation – <https://stock-trading-simulation.herokuapp.com>

Spring 2022

- Developed 5-page website to allow users to trade artificial stocks with real-time market values.
- Utilized ReactJS, MongoDB, NodeJS, and Express for full-stack development, with deployment on Heroku.
- 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](https://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:** Java, Python, C/C++, C#, Unity, HTML/CSS/JS, NodeJS/ExpressJS, MongoDB, ReactJS, Angular, R, SQL  
**Language:** Proficient in English and Spanish (read/write/speak)