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, Minor in Robotics; Threads: Systems and Architecture, Intelligence; GPA: 4.0 * Relevant Coursework: Object Oriented Programming, Data Structures and Algorithms, Computer Architecture, Computer Systems and Networking, Software Engineering Design, Machine Learning, Design/Analysis of Algorithms | | | | | |
| **Work Experience** | | | | | |
| **Amazon: Software Development Engineer Intern (On-Site: Austin, TX)** | | May - August 2023 | | | |
| * Increased ad targeting affinity values for Amazon Audio services by 100% (doubled) by creating new algorithm in AWS Lambda/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 12 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 - Present | | | |
| * Working on behavior tree integration for PhD research project involving drone behavior and control. * Involves working with packages in ROS2 (Humble) and C++ with Ament Cmake on Ubuntu 22.04. | | | | | |
| **Organizations** | | | | | |
| **RoboJackets: RoboNav Team - Software Lead (from April 2023)** | | | September 2022 - Present | | |
| * Leading team of 20 software developers to develop code for the University Rover Challenge. * Involves building of ROS2 nodes (both in C++ and Python) for communication of ROS2 topics/data channels. * Projects include perception (OpenCV), autonomous navigation and SLAM (Nav2), arm control (MoveIt2), hardware interfacing and abstraction (ROS2 Control) and web interface integration for teleoperation (ReactJS, HTML, CSS) | | | | | |
| **Georgia Tech Vertically Integrated Project: LIDAR Lab – Undergrad Researcher** | | | | August 2023 - Present | |
| * Working with arena-ros-nav library along with custom libraries to build deep reinforcement learning alternatives to improve speed and accuracy of multi-agent planning. * Involves usage of Linux, ROS (Noetic), C++, Python to create, build, test, and use packages. | | | | | |
| **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 the past for people to view my professional experience. | | | | | |
| **Stock Trading Simulation –** [**https://stock-trading-simulation.herokuapp.com**](https://stock-trading-simulation.herokuapp.com) | | | | | Spring 2022 |
| * Multi-page and comprehensive website for allowing users to trade artificial stock with real-time market values. * Utilizes ReactJS, MongoDB, React/Express to allow for full-stack development, with deployment on Heroku. * Highly data driven, used an external stock price API and optimized to minimize calls to it; uses databases, REST API. | | | | | |
| **Super Metroid Game Recreation - youtube.com/watch?v=va7BnZfb\_rY** | | | | | Fall 2021 |
| * Comprehensive recreation of Nintendo’s 1994 game “Super Metroid” using C# and the Unity game engine. * Required work in object interaction, graphical/audio implementation/optimization, and physical applications. | | | | | |
| **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) | | | | | |