David Danielian

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OBJECTIVE

Obtain a full-time job upon graduation on May 2023 working on exciting software and/or robotics engineering projects

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EDUCATION

Worcester Polytechnic Institute   Worcester MA   **Class of 2023**
Computer Science Major, Robotics Engineering Minor, 3.76 GPA
Relevant Coursework: Software Engineering, Unified Robotics, Human-Computer Interaction, Foundations of Computer Science, Algorithms, Databases, Systems Programming Concepts, Machine Organization and Assembly, Machine Learning, Artificial Intelligence

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SKILLS

Software: Git, AWS, Google Cloud Platform, Unity, MySQL, Linux, Solidworks, Figma
Programming: Python, JavaScript/TypeScript, Web Development (HTML, CSS, ReactJS, Django, Flask, GraphQL), Java, C++, C, C#, .NET, SQL, ROS
Other Experience: Agile Methodology, CAD, Additive Manufacturing FDM

PROJECTS

Brain-Computer Interface to Improve Education
Developing a Brain-Computer interface that makes use of machine learning models to monitor and visualize a user's cognitive state while doing learning tasks. Created Chrome extension with Flask API to receive brain data and display visuals in browser.

VR Haptic Gloves
Developing VR haptics gloves with finger position tracking, force feedback, and electro tactile feedback. Responsible for sensor analysis, writing firmware, and creating test environments in Unity.

BrainEx: Brain Signal Analysis Tool
Developed features and maintained codebase for React application with Django backend. The App is used for time series analysis of fNIRS brain signal data, allowing the user to search for similar sequences.

Environment Mapping and Path finding Robot
Programmed a Turtlebot3 robot to navigate and map a maze using a Lidar sensor and plan optimal paths through the maze using A* search. Code was written in Python using ROS

Decision Making Web Application
Worked in a team of 4 to create an AWS app from scratch for the Software Engineering course. The app was designed to help teams make decisions by voting and commenting on choices. Helped design the UI and API. Was responsible for developing back-end functionality in Java, and designing and managing an SQL database.

Spotify Playlist Analyzer
Created an interactive web page to analyze Spotify playlists using React and the Spotify API. The website displays attributes of Spotify music playlists and allows users to find new songs to add to a playlist.

Virtual Reality Physics Lab
Developed a prototype for an educational VR application to simulate a physics lab environment with the Unity Engine. Developed code in C# that interfaced with the Python backend through socket communication.

References are available upon request to protect my mentors and colleagues privacy

WORK EXPERIENCE

Catchpoint   Remote   May 2022 - Aug 2022
Software Engineering Intern
- Updated legacy web pages written in .NET Web Forms to React GraphQL stack
- Documented functionality of the legacy page to assess required changes
- Expanded GraphQL API to query and mutate database and created the new page in React

Human-Computer Interaction Lab WPI   Worcester, MA   May 2021 - Present
Research Developer
- Developed features for BrainEx, see projects
- Created tech demos and posters to present work

Math Department WPI   Worcester, MA   Jun 2021 - Oct 2021
Office Assistant
- Created excel sheets to organize data
- Wrote scripts to automate tasks
- General office tasks.

Watertown Recreation Department   Watertown, MA   Jun 2016 - Aug 2020
Tennis Camp Counselor
- Organized activities and games for summer camp
- interacted with children and adults of a variety of ages.