COLLIN DANG

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Education

University of Washington | Seattle, WA | Class of 2023
Major: Computer Science
GPA: 3.94

Technical Skills

Languages: Python, Java, JavaScript, HTML/CSS, SQL, C, MATLAB, C#, Bash
Software/Tools: Git, Django, Linux, Unity, ROS, Vue.js, Android Studio, Google Firebase, Raspberry Pi

Work Experience

Undergraduate Research Assistant | UW Robotics Laboratory
Feb 2022 – Current
- Work on AURMR (Amazon-UW Robotics Manipulation Research) project under guidance of Professor Joshua Smith and PhD student Boling Yang
- Integrate motion planner to move robotic arm and avoid collisions in ROS (Robot Operating System)
- Write scripts for calibration of robotic arm with respect to surrounding environment
- Improve robot gripper representations within simulation environment to more accurately represent real life

Software Engineering Intern | Dotmote Labs
June 2021 – Sept. 2021
- Managed SWEEP, a workflow management system for large companies
- Used Python, JavaScript, and Django to update and improve the SWEEP web app
- Created and accessed SQL databases within the Django framework
- Prepared SWEEP app for official launch to the public

Undergraduate Research Assistant | UW Sensor Systems Laboratory
April 2021 – Sept. 2021
- Used Python and MATLAB to transmit and decode sound data with a Raspberry Pi
- Automated many of the encoding and decoding tasks
- Lowered bit error rate to <1% for all transmissions
- Presented findings to Boeing, which resulted in a research grant for UW Sensor Systems Laboratory

Robotics Teacher/Summer Intern | Radiance Learning
July 2019 – Aug. 2019
- Worked at Radiance Learning, an enrichment program for teaching STEM subjects to elementary and middle school students
- Used Lego Mindstorms EV3 kits and coding software
- Taught robotics to 50+ students over the course of eight weeks

Programming Projects

No Belly Left Behind | HackUMass VII Hackathon
Nov. 2020 – Dec. 2020
- Created a mobile app for locating over 300 food banks in the Seattle area
- Worked on backend, handling data in JSON format and parsing the data for later use
- Integrated GPS that found the user's location and proximity to nearby food banks
- Implemented filter system that filtered food banks by proximity to user, days/hours open, and target audience
- Used Android Studio, Google Maps SDK, Google Firebase, and the Seattle Public Data Set

FitFriends | Hack '20 Hackathon
July 2020 – Aug. 2020
- Created a web app that allows users to share and post workouts online
- Worked on frontend, creating the user interface and handling user input
- Used variety of text forms to send data to backend for processing, and then displayed processed data on web page
- Used Vue.js, JavaScript, HTML, and CSS

Awards: National Merit Finalist, National AP Scholar, WA HS Chess State Team Championship 2020: 2nd place

Relevant Coursework: Intro to Algorithms, Software Design and Implementation, Intro to Artificial Intelligence, Systems Programming, System and Software Tools, Hardware-Software Interface, Introduction to Data Management, Data Structures and Parallelism, Foundations of Computing I and II