Maxwell Yang

Engineering Physics Undergraduate Student
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Technical Skills

Programming Languages: Java, Python, JavaScript, C++, HTML, CSS, SQL, Kotlin, MATLAB
Development Tools: Node.js, Git, Android Studio, PostgreSQL, Firebase, AWS, React, Flutter, Azure
Software and Systems: Windows, Linux, Microsoft Office Suite
Other: Github, Bitbucket, JIRA, Confluence, Agile, Scrum, JSON, XML

Experience

Canadian Food Inspection Agency *Ottawa, ON*
Mobile Application Developer Intern (Android Studio, JavaScript, Node.JS, SQL, Linux) *Jan 2019 - Apr 2019*
- Built an enterprise-level Android communication application designed for the workplace from end-to-end
- Developed in Android Studio embedding the MVC (Model-View-Controller) design pattern for code architecture
- Designed structure of RDBMS implemented in PostgreSQL, interacting with database using SQL commands in Node.js
- Facilitated HTTP requests using a REST API from Express.js to connect to PostgreSQL and user authentication in Node.js
- Collaborated with teammates to ensure consistency and efficiency with daily stand-ups and frequent code review

University of British Columbia *Vancouver, BC*
Mathematics Undergraduate Teaching Assistant *Sept 2019 - Dec 2019*
- Led weekly workshops for a class of 30 students as a TA for MATH 180: Differential Calculus with Physical Applications
- Communicated core concepts in differential calculus and developed problem solving/teamwork skills in math

Projects

greenEats (Winner of nwHacks 2020) - http://bit.ly/nwHacks20
(Android Studio, Google Cloud, Microsoft Azure, Standard Library) *Jan. 2020*
- Awarded 1st place out of 145 teams at nwHacks, Western Canada's largest 24-hour hackathon
- Handled full-stack development for greenEats: an all-in-one grocery and food waste management app
- Integrated Firebase ML Kit Vision API to scan receipts and catalog items stored in Cloud Firestore
- Enabled speech-to-text voice recognition to catalog items using voice commands operated through Microsoft Azure
- Constructed custom API in stdlib to suggest recipes using items close to expiry to incentivize food waste prevention

Machine Learning Robot Simulation - http://bit.ly/ml-robot
(Python, ROS, Gazebo, Linux) *Sept. 2019 - Dec. 2019*
- Awarded 3rd place out of 20 teams
- Used Python, ROS, and Gazebo to simulate a machine learning robot intended to navigate a parking lot based course
- Implemented computer vision capabilities using OpenCV for operations on images, object detection, and navigation
- Constructed multi-layered neural network to correctly identify license plate characters utilizing TensorFlow and Keras

Hedwig (Engineering Physics Robot Competition) - http://bit.ly/robot-comp
(C++, Arduino) *May 2019 - Aug. 2019*
- Awarded 2nd place out of 16 teams at the Annual Engineering Physics Robot Competition, robot built from scratch
- Led software development on fully autonomous robot in C++ using the Arduino library integrating object-oriented design
- Implemented a PID controller for robot movement and communication between two STM32 Blue Pills for arm movement
- Worked on integration testing of robot by ensuring consistency as new components were built and added onto the robot
- Prototyped and designed robot in OnShape, applying engineering methodologies to iterate through design concepts

Education

University of British Columbia *Vancouver, BC*
BASc in Engineering Physics, Minor in Honours Mathematics *Sept 2017 - Apr 2022 (expected)*
- 86.2% cumulative average, 2017 - 2018 Dean's Honour List
- **Relevant Courses**: Algorithms and Data Structures, Software Construction, Intermediate Algorithm Design and Analysis