Yang Li

Mechatronics Engineering Student

A quick, creative, and eager learner with a variety of experiences in developing and utilizing software for engineering.

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SKILLS

- Soft Skills: Leadership, Teamwork, Technical Writing, Technological Agility
- Software Skills: Bootstrap, C++, CSS, Fusion 360, Google Workspace, HTML, Java, JavaScript, Python

WORK EXPERIENCE

Quality Assurance Software Developer — *January – April 2022*

Polar Mobile Group Incorporated — Toronto, ON

- Developed Selenium automated tests with Page Object model design patterns to improve code readability.
- Updated frontend automated tests to interact with elements in the DOM of web pages and to monitor network traffic changes.
- Increased department code coverage by 20 percent.
- Verified software products by manually testing features and documenting issues with Jira ticketing software.

Exhibit Designer — *July – September 2021*

Canada South Science City — Windsor, ON

- Brainstormed exhibit ideas to create a list of 30 interactive exhibits that could be built to attract new visitors.
- Constructed prototypes using sustainable and recycled materials to keep costs below $1,000 for each exhibit.
- Documented work hours using Google Sheets to track progress on exhibits and increase productivity.

PROJECTS

TensorFlow Image Classification Program — *April 2022 – Present*

- Implemented a convolutional neural network to recognize patterns and common features in training data from the CIFAR-10 dataset, achieving an overall accuracy of more than 80 percent.
- Upgraded project code to allow trained neural networks to be used to classify user-uploaded images.
- Converted numerical model training data into a graphical form to create a visual representation of training progress over epochs using Seaborn and Matplotlib Python libraries.

Brunhild Scale Model Spaceship — *April 2022 – Present*

- Combined surface and solid modelling techniques to create solid bodies with complex surface profiles using Fusion 360.
- Followed the engineering design cycle to continuously increase model fidelity and improve presentation.
- Personally manufactured the completed 3D model using a Formlabs Form 2 resin printer for greater detail compared to standard filament extruding printers.

EV3 Number Drawing Robot — *October – November 2021*

- Assembled a robot and integrated gyroscopic, ultrasonic, and touch sensors to draw strings of numbers.
- Integrated data structures in C++ to parse large pieces of input and operational data.
- Developed object-oriented classes, functions, and algorithms in C++ to efficiently determine drawing paths for each number represented in 7-segment display form.

ImaTex Website — *September – October 2021*

- Incorporated Bootstrap for frontend aesthetics and Prompt API for text recognition, increasing functionality and visual appeal of site while keeping code volume and complexity low.
- Archived user data by using Google Sheets as a storage database.
- Integrated Google Cloud API services with Python code to access and modify Google Sheets autonomously.

EDUCATION

University of Waterloo

Bachelor of Applied Science: Mechatronics Engineering — *September 2021 – Present*