

# Ivan Mak

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## Skills

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**Programming Languages** JavaScript, HTML, CSS, Python, Java, C/C++, C#, MATLAB  
**Frameworks/Libraries** React, Redux, Node, Express, MongoDB, Flask, SASS, Bootstrap, jQuery, SQLite, Jest, ROS  
**Other** Git, Bash, Webpack, Heroku, Unix, Test Driven Development, Data Structures and Algorithms

## Projects

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### DevBook – Social Media Web Application

[Live Site](#) | [Github](#)

*React.js, Redux, MongoDB, Express, Node.js, JavaScript, HTML, CSS, Bootstrap, Heroku*

- Built a social media web application for software developers to create and share their profiles and posts online
- Managed all application states using **Redux** to create reusable functional components in **React**
- Designed **REST API** for **Express** Router middleware-based APIs with **MongoDB** integration
- Developed responsive and interactive UI elements and animations with **HTML**, **CSS**, and **Bootstrap**

### Exercise Tracking Web Application

[Live Site](#) | [Github](#)

*React.js, MongoDB, Express, Node.js, JavaScript, HTML, SASS, Heroku*

- Built an exercise tracking application using **React** and **Node** to add, edit, and view exercise
- Designed **REST API** endpoints that implement database connections using **Express** and **MongoDB**
- Deployed production web application online with **Heroku** and **Git**

### Virtual Stock Trading Web Application

[Live Site](#) | [Github](#)

*Python, Flask, SQLite, HTML, CSS, Bootstrap, Jinja*

- Built a web application with **Flask** to create user accounts and search, buy, and sell virtual stock
- Utilized the **IEX Cloud API** to query for real-time stock market quotes
- Implemented database connections with **SQLite** and **Python** to store and organize transaction history

### Autonomous Object Recognition Self-Balancing Robot

*Python, C++, Linux, ROS (Robotic Operating System), TensorFlow, Raspberry Pi, Arduino*

- Programmed object detection of vehicles using **TensorFlow** with **90%** accuracy
- Implemented autonomous navigation using **C++** and **Python** with the **ROS** navigation Stack
- Developed a closed loop PID control algorithm using **C++** and **Python** to test self-balancing system

## Experience

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### Dynaplas Ltd.

Sep. 2018 – Apr. 2019

*Junior Manufacturing Engineering Coop*

*Scarborough, ON*

- Automated quality inspection of automotive parts by programming a collaborative 6-axis robot arm
- Designed guarding layouts and fixtures using **SOLIDWORKS** to ensure safety and efficiency on the plant floor

### Brockport Home Systems

May. 2016 – Aug. 2016

*Junior Project Analyst*

*Etobicoke, ON*

- Re-designed and fabricated pneumatic lifting table using **Siemens NX** and welding to optimize workspace
- Tested small scale pneumatic and hydraulic actuators using sensors to verify functionality for future projects

## Education

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### Ontario Tech University

Apr. 2020

*Bachelor of Engineering (Honours), Mechatronics Engineering*

*Scarborough, ON*

### The Odin Project

Feb. 2021

*Open-Source Web Development Bootcamp – Full Stack JavaScript Track*

*Online*