# JED YEO

**Engineering Physics Student**

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## WORK EXPERIENCE

### Developer Co-op

**Plantiga Technologies**

Jan 2020 – Apr 2020 | Vancouver, B.C.

- With Google Cloud Platform, developed a data pipeline in Python and ReactJS to anonymize patient data and activities for the admin-facing interface of the data analytics platform ensuring HIPAA compliance
- Created an automated reporting system in Python which responded to user requests through the Slack API, and returned a patient report with past data and activities
- Aided in prototyping and development of a novel Smart Charging Dock in Golang, with a focus on Bluetooth communication

### Electrical & Controls Co-op

**Dynamic Attractions**

May 2019 – Aug 2019 | Port Coquitlam, B.C.

- Development of an HMI (Human Machine Interface) to aid in safety testing as well as expedite the QA process of a high voltage ride systems
- Conducted and monitored FAT (Factory Acceptance Testing) of ride systems to ensure the project met international safety standards
- Troubleshot IP and network issues to establish data transfer and communication for multiple projects

## PROJECTS

### Autonomous Can Collecting Robot

**Design Project** | August 2020

- During the COVID-19 pandemic, collaborated remotely in a team of 4 to design and prototype a fully autonomous robot to collect cans with the objective of competing in the Engineering Physics 2020 Robot Competition
- Gained experience programming the STM32 Blue Pill microcontroller and using it to control a complex robotic system with multiple servos, DC brushed motors, and reflectance sensors
- The robot was built completely from scratch from household materials in a short time frame of 6 weeks

### Graph Datatype Universe Simulation Project

**Course Project** | October 2019

- Designed a graph datatype in Java to represent the traversal of planets in a fictional universe
- Implemented Djikstra's algorithm in combination with breadth-first search to find the shortest path between any two planets
- Engineered a spanning algorithm to maximize score received from visiting weighted vertices in the graph
- In following test-driven development practices, achieved 95% line and branch test coverage using JUnit to test our implementation of the datatype

## EDUCATION

### BASc, Engineering Physics

**University of British Columbia**

Sept 2017 – Present

- Expected Graduation – May 2023
- Available for **4 months** starting May 2021
- Interested in research opportunities during the school year

## SKILLS

**Programming**

Python | Java | C/C++ | Go | ReactJS | MATLAB | Assembly | Verilog

**Electrical**

Circuit Design & Analysis | Digital Logic Design | Soldering | Multimeter | Oscilloscope

**Software**

Google Cloud Platform | Git | JUnit | Quartus | ModelSim | Word | Excel | Powerpoint | HMI Programming

## COURSEWORK

- Principles of Software Architecture
- Computer Vision & Machine Learning
- Robotics Design & Prototyping
- Microcomputers & Digital Logic
- Mathematical Proof
- Circuit Design & Analysis
- Signals and Systems
- Data Structures and Algorithms
- Experimental Laboratory Techniques

## INTERESTS & HOBBIES

- Freestyle Snowboarding
- Hockey
- Bullet Chess
- Video Gaming
- Gourmet Cooking & Barbecuing