Jed Yeo

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Education

University of British Columbia Vancouver, B.C.
Bachelor of Applied Science in Engineering Physics, Minor in Honours Mathematics *September 2017 – May 2023*

Experience

Research Assistant April 2021 – Present
UBC Computer Science Department – LEAP Research Group *Vancouver, B.C.*

- Investigating machine learning methods to conglomerate and classify medical datasets from multiple sources whilst maintaining model classification accuracy and reducing compute time by a factor of 3x
- Researching data clustering techniques to process similar images in batches in order to improve model scalability when analyzing large input datasets

Developer Co-op January 2020 – March 2020
Plantiga Technologies *Vancouver, B.C.*

- Developed a data pipeline with **Google Cloud Platform** using **Python** and **ReactJS** to showcase anonymized patient data for an administrative interface, ensuring compliance with HIPAA standards
- Created an internal tool using **Python** and the Slack API which generated a patient report with past data and activities, optimizing data retrieval for the maintenance engineering team
- Gained experience with **ReactJS** and pushed weekly bug fixes to the internal Plantiga management dashboard, working on features such as data retrieval and information widgets

Electrial & Controls Co-op May 2019 – August 2019
Dynamic Attractions *Port Coquitlam, B.C.*

- Programmed a Human Machine Interface for the QA stage of a high voltage ride system which controlled the orientation of multiple robotic arms, as well as monitored values of interest such as robot position and cycle count, which expedited the testing phase of the project by weeks at a time
- Managed and configured the communications array of an oil-finding seismic generator to ensure system components were monitored and maintained according to operating procedure

Projects

Machine Learning Models for Cryogenic Microscope Imaging | *Python, Git* March 2022

- Designed a **Python** wrapper class for an open-source C program to generate artificial transmission electron microscope images and tilt series of biological samples for use in algorithmic development
- Implementing an iterative refinement machine learning model with **Tensorflow** to estimate alignments of generated 2-dimensional particles and reconstruct a 3-dimensional model
- Participated in rigorous code review sessions and weekly update presentations in collaboration with UBC Math and Stanford Linear Accelerator Center to ensure good software engineering practices

Autonomous License Plate Reading Robot | *Python, ROS, Linux, Git* December 2020

- In a team of 2, collaborated remotely to design and develop a fully autonomous virtual robot in **ROS Melodic** to read and identify license plates within a virtual world
- Used classical computer vision techniques to control the robot's movement by leveraging scipy functions and achieving a 100% completion rate of the circuit
- Designed a custom convolutional network with **Keras** to identify alphanumeric characters on license plates, with the model reaching 99% accuracy on testing data sets

hireflow – Recruitment Management App | *ReactJS, Postman, Git* September 2020

- Used **ReactJS** to design a modular dashboard for a new recruiting platform to display applicants and their profiles to recruiters
- Collaborated with the back-end team to ensure integration of the front-end components with the back-end server and database using **Postman**

Technical Skills

Languages: Python, Java, C/C++, Golang, ReactJS, scipy/numpy, tensorflow
Developer Tools: Git, Google Cloud Platform, VS Code, Visual Studio, IntelliJ