Justin Ong

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EDUCATION

University of Washington (GPA: 3.81) Seattle, WA
Directly admitted as Computer Science major, Class of 2022

SKILLS

Languages: Python, Java, C++, JavaScript, HTML, CSS
Tools: PyTorch, Docker, Spark, NumPy, Pandas, React.js, Django, Selenium WebDriver, Rasterio

EXPERIENCE

Software Engineer | DotMote Labs Jun 2019 - Present
Implementing scalable workflows for climate change research

- Spearheaded end-to-end workflow that determines the flowering of a specified region by analyzing satellite imagery data by processing images with **NumPy, Pandas, Rasterio**
- 1 of 3 engineers working on https://sweep.run, the UI for SWEEP - a scalable workflow tool
- Created a dynamic graph visualization tool to monitor and create workflows with sigma js libraries
- Implementing an ML pipeline for object detection of flowers using YOLO
- **Publication**: John, A.; **Ong, J**.; Theobald, E.J.; Olden, J.D.; Tan, A.; HilleRisLambers, J. Detecting Montane Flowering Phenology with CubeSat Imagery. *Remote Sens.* 2020, *12*, 2894.

SDE Intern | Amazon Lab126 Jun 2020 - Sep 2020
Standardized and optimized ETL pipeline

- Utilized **Spark** to increase CPU utilization of clusters as well as the loading time of utterance data
- Standardized ETL pipeline by reducing redundancies and removing unwanted code dependencies

Computer Programming II Teaching Assistant | UW Sep 2019 - Mar 2020
Lead bi-weekly section teaching basic data structures and programming concepts

Grace Children's Foundation Volunteer | Impact++ Jan 2019 - Jun 2019
Web app that connects children in need of medical aid with doctors willing to treat them

- Developed extensively in **React** on the search results by organizing output, adding functionality to mark favorite organizations, and linking organizations/people to their respective resource page

PROJECTS

Reimplementation of World Models paper Dec 2020
Worked with one other person to implement a slightly modified version of the proposed architecture

- Achieved average reward of 570 learning in the OpenAI car-racing environment
- Generated hidden network weights and a latent vector to train the agent using an evolution strategy

Crescendo | Dubhacks
Music discovery platform that promotes upcoming artists Oct 2020

- Implemented the backend framework for the website using **Flask**
- Generated song snippets based on music category using the Spotify API

Registration Bot Sep 2019
Python script that registers for a class once there is an opening for a given SLN number

- Utilized **Selenium WebDriver** to dynamically scrape registration page and update courses