Justin Ong

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EDUCATION

University of Washington (GPA: 3.82) Seattle, WA
Directly admitted as Computer Science major, Class of 2022

SKILLS

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

EXPERIENCE

Research Assistant | Neural Systems Lab Jan 2021 - Present
Researching neural co-processors - a framework that leverages AI in closed-loop BCIs
- Demonstrated efficacy in a reinforcement learning paradigm by successfully improving the performance of a damaged agent by incorporating the components of a neural co-processor

Software Engineer | DotMote Labs Jun 2019 - Mar 2021
Implemented 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, which lead to a publication
- Created a dynamic graph visualization tool to monitor and create workflows
- Implemented an ML pipeline for object detection of flowers using YOLO

SDE Intern | Amazon Lab126 Jun 2020 - Sep 2020
Designed and implemented ETL pipeline for speech data
- Optimized the CPU utilization of spark clusters in order to speed up the loading time of speech data

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

PUBLICATIONS

1. 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. https://doi.org/10.3390/rs12182894

PROJECTS

Reimplementation of World Models paper Dec 2020
Reimplementation of vision model, memory RNN, and controller to replicate results in the paper
- Achieved a sufficient reward to navigate the OpenAI car-racing environment (worked with a partner)

Crescendo | Dubhacks
Music discovery platform that promotes upcoming artists Oct 2020
- Implemented the backend framework and generated song snippets for music categories

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