

## 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 an average reward of 570 in the 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