ANDREW ZHANG

andrewzhang505@gmail.com (213) 574-4612 andrewzhang505.github.io andrewzhang505

EXPERIENCE

Research Intern
Hugging Face & USC RESL

Jun 2022 – Nov 2022 Los Angeles, CA

- Performed testing, environment integrations, and development for Sample-Factory, an open source high throughput reinforcement learning framework

Python Developer
Pacific Institute for the Mathematical Sciences

Jul 2021 – Aug 2021 Vancouver, BC

- Developed interactive math educational resources for Grade 5-12 students under the Callysto program using Jupyter notebooks and Python

Software Developer Co-op
MailChannels

May 2020 – Aug 2020 Vancouver, BC

- Worked as a full stack developer for MailChannels' email and spam filtering services.
- Designed web page components for client sign-up and domain registration using JavaScript React.
- Improved backend services for email traffic through implementing caching, bugfixes, and generating performance metrics.

Machine Learning Co-op
Xtract AI

May 2019 – Dec 2019 Vancouver, BC

- Developed machine learning models for detecting forgery in images and videos by looking for image artifacts and copy move forgery
- Created video classification model for detecting colon cancer. Achieved 80% accuracy on blind test set and trained on limited data
- Worked on time series classification models for weapons detection using magnetic signals measured from various metallic objects

SKILLS

Machine Learning

Python PyTorch TensorFlow Computer Vision Reinforcement Learning Deep Learning

Software Engineering

Java C/C++ JavaScript Angular React MATLAB SQL Linux Git GCP

PROJECTS

Chassis Sub-Team Lead
UBC Solar Student Design Team

Sept 2017 – Apr 2021

- UBC Solar is a student design team that designs and builds a solar powered race car and competes every two years in the Formula Sun Grand Prix
- Lead team of 3-8 engineering students to design, test, and manufacture the steel space-frame chassis of the solar car
- Designed chassis in SolidWorks to withstand 5G collisions and tested performance using FEA in ANSYS
- Designed and manufactured auxillary components to mount electrical and mechanical components of the car to the chassis

UAV Avoidance Capstone Project
ENPH 479 – Sponsored by Iris Automations

Sept 2020 – Apr 2021

- Developed reinforcement learning solution for maneuvering fixed wing UAV to avoid manned aircraft
- Trained and tested solution in simulated environment and achieved 20% increase in avoidance rate compared to standard maneuvers

Arc Flash Detection Capstone Project
ENPH 459 – Sponsored by Osensa Innovations

Jan 2020 – Apr 2020

- Created and tested fiber optic based system to detect arc flashes produced by electrical faults in high voltage power stations, and integrated solution with Osensa's temperature sensing system

EDUCATION

M.S. Computer Science
University of Southern California

Sept 2021 – May 2023 (Expected)

- 4.0 GPA
- Computer Science Master's Student Honors Program

B.ASc. Engineering Physics
University of British Columbia

Sept 2016 – Apr 2021

- 90% cumulative average
- Minor in Honors Mathematics