Zhi-Liang(Sunny) Yuan

linkedin.com/in/suni-yuan/ • sunny.yuan0333@gmail.com • +1 (212) 123-4567 • github.com/sumiyuan

EDUCATION

UNIVERSITY OF TORONTO, ST GEORGE CAMPUS											**Toronto, ON**
Bachelor of Science, Application Math Specialist, Computer Science Major									**2021-2025**
- **Relevant Coursework:** Software Design (Java), Software Tools and Systems Programming (C), Data Structures and Algorithms (Python), Intro to Machine Learning (Python), Multivariable Calculus with Proofs (Math), Mathematical Modelling (MATLAB, Python), Intro to Graph Theory (Math)

WORK EXPERIENCES

HONG KONG APPLIED SCIENCE AND TECHNOLOGY RESEARCH INSTITUTE							**Science Park, HKSAR**
Machine Learning Intern											**June 2024 - August 2024**
- Led 6 intern team to design, implement and benchmark SAM1, SAM2 image segmentation model to detect metallic deformation defects in car parts using Python, Transformer and Pytorch
- Achieved an accuracy of 82% IoU comparing output mask to ground truth mask utilizing Adam optimizer and a custom dice cross entropy loss function for training.
- Implemented an algorithm in Verilog to activate a camera and lights using an internal clock with the Vivado design suite on a Zynq 7400 series Xilinx Z7020 development board.
- Initiated an after work rock climbing initiative that involved 20+ employees to experience bouldering.

UNIVERSITY OF TORONTO HUMANOID ROBOCUP TEAM									**Toronto, ON**
Software Lead												**Oct 2022 - April 2025**
- Led a 8 person software team to implement behavioral and scoring algorithms for the robot.
- Rewritten and implemented main strategy code as a behavioral tree with PyTree and ROS1.
- Designed and implemented 2D testing environment for strategy development and software debugging with PyGame
- Debugged robot operation strategies with Python and OpenCV within a simulated environment using WeBots.
- Represented UofT internationally by competing and placing 4th overall at the 2023 RoboCup.

UNIVERSITY OF TORONTO AEROSPACE TEAM										**Toronto, ON**
Software Lead												**Oct 2022 - April 2023**
- Designed, researched, and integrated electronic components to work with the NVIDIA Jetson platform.
- Wrote concise and performing C++ and Python code to integrate components to NVIDIA Jetson with various protocols

PROJECTS

CLIMBHUB												**Toronto, ON**
- Designed and implemented an all in one competition planning web application using React, and Firebase allowing tournament organizers to easily manage invitation, participant information, and on the day tracking for climbs sent and score
- Designed and deployed mobile application using React Native for competitor on the day climb submission allowing for seamless compatibility and instantaneous rank update

CSC301 SOFTWARE ENGINEERING COURSE PROJECT									**Toronto, ON**
- Led a 8 person software team to implement a code review command line algorithm using JavaScript that utilized Cohere AI to standardize code within client company Ollon to be used by 30+ employees.
- Developed and deployed various features requested by Ollon on Heroku using React for client verification and internal testing.
- Implemented functionality with scalability in mind, able to be scaled with more functionality with additional use cases.

SKILLS

- Programming Languages: Java, Python, JavaScript, C/C++, Flutter
- Technologies: Git, Arduino/Teensy, ROS, React, Firebase, React Native
- Languages Spoken: English (Professional), Chinese Mandarin (Conversational), Spanish (Elementary)