KWOK HUNG HO

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WORK EXPERIENCE

Brain Corp Mar 2023 - Present
Software Development Engineer in Test

- Automated 50+ test cases for shelf-scanning/cleaning robots, shortening testing by 30+ hours per release.
- Enhanced automated reporting by uploading log archives and test results to GCP, with integrated real-time updates to Slack and Jira, reducing triage times by 20% and enabling effective KPI tracking.
- Spearheaded a TKInter-based GUI application that abstracts the original CLI test automation framework to a user-friendly experience, boosting usage of the framework by 25%.

3D Systems Jun 2022 - Sep 2022
Data Scientist Intern

- Created a Node.js and Electron fleet-monitoring system for all 3D bio-printers, cutting downtime by 30% and enhancing team workflows through remote real-time data visualization and log management.
- Developed a C++ and OpenCV-based auto-focus procedure for 3D bioprinter projectors, slashing focus time from one hour to just five minutes.

UCSD Advanced Robotics and Controls Lab Dec 2021 - Aug 2022
Research Assistant

- Utilized TensorFlow and MaskRCNN to perform detection and segmentation of tumors in DICOM images of lungs, and developed 3D visualization pipelines for improved post-inference data analysis.

Risksis Mar 2021 - Sep 2021
AI Specialist Trainee

- Conducted post-training quantization on deep learning models using TensorFlow Lite, and acceleration using TensorRT reducing inference latency by 75% for mobile, edge device and NVIDIA GPU deployments.
- Implemented Python ETL pipelines to extract text from over 2,000 PDFs using OCR, analyzed the text with NLP models (BERT and XLM-RoBERTa), and stored results in MongoDB and Elasticsearch.

ASTRI Jun 2019 - Sep 2019
Software Engineer Intern

- Developed an augmented reality UWP application for the Microsoft HoloLens with Unity (C#), ROS, and WebSocket API, allowing users to spawn objects via gestures at AR tag locations.

PROJECTS

SLAM with Texture Mapping
Developed an efficient 2D particle filter SLAM algorithm from scratch for self-driving cars using lidar, wheel encoder and gyroscope data. Also implemented Kalman Filter SLAM with IMU and Stereo Camera data.

Multi-Agent Q-Learning with GPU
Implemented asynchronous parallel Q/Q-lambda learning using C++ and CUDA. The RL environment consists of a 32x32 grid and 128 agents that learn in parallel to reach a single flag while avoiding 96 mines.

SKILLS

Programming:	**Python, Golang**, C/C++, TypeScript, Java, C#, Haskell
Domain:	Robotics, Reinforcement Learning, ML/Statistical Learning
Software & Tools:	Git, Linux, Docker, Kubernetes, PyTorch, TensorFlow, OpenCV, Github Actions
Web Development:	React, Next, Node, CSS, FastAPI, Django, ASP.NET, Selenium

EDUCATION

University of California, San Diego
M.S in Intelligent Systems, Robotics & Control — *Mar 2023 — La Jolla, CA*
B.S in Electrical Engineering — Machine Learning & Control — *Jun 2021 — La Jolla, CA*