Jeffrey Ng

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Skills

Languages: Python | C | Java | Go | Dart | SQL
Technologies: Version Control | Distributed Systems | Container Deployment | PyTorch | CAN bus | Linux | ROS

Experience

Machine Learning & Data Junior Engineer January 2022 - Present
Massachusetts Institute of Technology *Cambridge, MA*

- Maintaining data pipeline and processing terabytes worth of naturalistic driving data supporting the AVT consortium, which comprises of automakers, insurance companies, and tier 1 suppliers
- Gathered requirements, designed, and implemented road trajectory and curvature algorithms with PyTorch
- Researched and led new approaches for in-vehicle pose estimation
- Programmed participant identification tool with Python to efficiently filter and validate video stream
- Curates and queries new datasets for research on human interactions with modern vehicles

Machine Learning Intern June 2020 - September 2020
Lawrence Livermore National Lab *Livermore, CA*

- Developing tools for intelligent autonomous sensor networks that will enable information extraction from uncertain environments and potential adversaries without centralized command-and-control agent
- Integrated simulation software after evaluating the capabilities of several solutions
- Work included computer vision, pathing, and swarming behavior

Lab Research Intern October 2018 - May 2019
University of California, Merced *Merced, CA*

- Collaborated with Ph.D. students on embedding awareness into drones with deep learning algorithms
- Built pipeline tools to process over 10,000 flight logs and simulate flights with ROS, Gazebo, & PX4
- Tuned neural network performance under different hyperparameters; presented paper & work at ICUAS

Education

University of California, Irvine Graduated: June 2021
Bachelor of Science in Computer Science *Irvine, CA*

- **Relevant Coursework**: Object Oriented Programming, Robotics, Machine Learning, Deep Learning, Algorithmic Design, Applications of Probabilities, Quantum Computation, & Software Engineering

Projects

Software Engineer February 2020
Autonomous Charging Bot *Irvine, CA*

- Won Best Infrastructure Hack at HackUCI 2020
- Designed a robot that navigates to a vehicle using ROS and Gazebo. With reinforcement learning, trained a modular robotic arm to reach a point in space being conceptualize as a charging tether.

Assistant Project Manager January 2018 - December 2018
Unmanned Aerial Systems *Merced, CA*

- Led a team of three computer scientist and seven mechanical engineers to develop an NDVI image analysis system that detects water stressed areas in Merced Vineyards
- Debugged OpenCV framework issues and redesigned image analysis program, as well as overseeing prototyping, testing, and delivery phases