

Dave Ho

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Software Engineer passionate in the fields of AI and algorithms design. Looking for opportunities to further my exposure in software development, machine learning, and to apply the theories I've learned to build robust and high-performing systems at scale.

PROFESSIONAL EXPERIENCE

Software Engineer – Mission Autonomy Anduril Industries, Costa Mesa, CA Aug 2023 – Present

- Building collaborative multi-agent systems for drone swarms in military defense operations using behavior trees.
- Devised algorithm for Area Search type mission progress tracking using polygons and geometric computation.
- Designed reusable behavior nodes and trees to perform search & rescue style missions in comms-denied environments.
- Implemented a suite of debug tooling for behavior tree authors to debug scenarios live, post-mission, and in simulation.
- Built infrastructure to allow robots to arbitrarily restart and operators to rebuild robot state to any point within the mission.

Software Engineer Intern – ML Foundations Snorkel AI, Palo Alto, CA Jun 2022 – Sep 2022

- Developing SnorkelFlow, a data labeling and synthetic generation platform for ML model training: [link](#)
- Implement labeling and ground-truth versioning mechanisms.
- Integrated ground truth DAG versioning, allowing users to rollback to previous versions of models.
- Developed in-place dataset swaps for applications, a first-class solution to update dataset schemas.

Software Engineer Intern – ML Foundations Snorkel AI, Palo Alto, CA Jun 2021 – Sep 2021

- Optimize the labeling functions and weak supervision foundation framework.
- Enabled trainable preprocessors, to allow operators to be fitted to application datasets.
- Implemented user-defined operator classes, allowing clients to export their own operators via application DAG.
- Implemented user-defined model classes, allowing registration of custom models via Jupyter Notebook
- Developed user improvements to estimated model training time, proper error surfacing, and transparency.

Data Science MTS VMware, Palo Alto, CA Jul 2019 – Jun 2020

- Train ML models to classify security risks to automate the security triaging process of virtual machines.
- Train ML models to estimate likelihood of workload timeouts and re-adjust the time assignment.
- Construct time-series models to predict workload / cost, and detect anomalies of machine activities.
- Provide an inhouse training on using PyTorch and HuggingFace/NLP for the engineering community: [link](#)

Machine Learning Engineer Twyne, Los Angeles, CA Jul 2019 – Jun 2020

- Twyne helps users interact with the world through simple and natural motions by bringing automated and customizable ML-based gesture recognition to the smartwatch.
- Conduct the full cycle model development from collecting data and feature engineering to Spectrogram Fourier Transform of time series data and training an LSTM model in PyTorch
- Developed framing and labeling scripts to process gesture motion data from smartwatch wearable to time series data.
- Improved model and customization of user gestures with Siamese networks (boost from 87% to 95% accuracy)
- Constructed prototype demo that uses gestures to navigate slides in PowerPoint presentation.

TECHNICAL SKILLS

AI / ML frameworks: Langchain, HuggingFace, PyTorch, sk-Learn, Pandas, Numpy

Deep Learning Architecture: Transformer, Diffusion, CLIP, GAN, GNN, CNN, LSTM/GRU, DQN, PolicyNetwork

Program Lang: Python, C++, Java, Javascript, R, SQL, Prompt engineering

Systems Linux, Git, RDBMS, Flask, Node.js, CircleCI, AWS, FastAPI, Pytest, React, Jest

EDUCATION

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Major in Computer Science; Minor in Data Science & Statistics, Sep 2019 – Jun 2023 | GPA: 3.92

AWARDS

Snorkel AI: Engineering Award Aug 2022 | Implementation of Trainable Operators and User Defined Classes

Snorkel AI: Engineering Award Jun 2021 | Implementation of Ground Truth and Application DAG versioning

UCLA: Best Hack, Hack on the Hill 7 Feb 2020 | Joint song guessing party game built with React JS and Spotify API