DYLAN GOETTING

(510) 926-2613 · <u>dylan-goetting.github.io</u> · dylangoetting@berkeley.edu

EDUCATION

UC Berkeley - M.S. Electrical Engineering & Computer Science, advised by Jitendra Malik

UC Berkeley - B.S. Electrical Engineering & Computer Science | B.S. Business Administration

May 2024

Management, Entrepreneurship, & Technology Program (50 accepted students out of 2000+)

CS Coursework (*Graduate-level): Robotics*, Deep RL*, LLM Agents*, Computer Vision, Discrete Math,

Computer Architectures, Data Structures, Computer Security, Statistical Learning, Circuits and Control

Total GPA: 3.90

WORK EXPERIENCE

Berkeley Artificial Intelligence Research, Berkeley CA

Aug 2023 - Present

Graduate Researcher

- First author on VLMnav, accepted to CoRL 2024 Workshop on Language and Robotic Learning. Website. Arxiv. code
- SSEAL: Novel framework enabling agents to autonomously improve, 2nd author and under review at ICML 2025. Paper
- VLA as Tools: Developed novel system, planning agent iteratively prompts a Vision-Language-Action model. Paper
- Used IsaacGym and Pytorch to improve adaptation mechanisms for quadruped robots in a multi-agent environment

IMC Trading, Chicago IL

Jun 2023 - Aug 2023

Quantitative Trading Intern

• Used statistical learning techniques and classical ML to model and predict toxic flow within the S&P index operation

LeanLaw, Remote CA

Aug 2023 - Dec 2023

Machine Learning Engineer (Contract)

- Led a team of 6 engineers to build an LLM application to answer clients' queries about their finances.
- Designed and built a novel vector database of language SQL pairs, which on inference queried labels based on cosine similarity for in-context learning. Built in a cybersecurity layer to ensure data privacy and prevent prompt injections

Cognitiv Corp, Seattle Wa

Jun 2021 - Aug 2022

Machine Learning Engineer - 2022

- Developed models with 10% higher AUC-ROC by implementing Bayesian Optimization into the company's deep learning library to efficiently search through hyperparameters, model architectures and feature combinations
- · Streamlined operations with a pipeline to automate model training and evaluation while decreasing computational spend

Machine Learning Research Intern - 2021

- Designed and created a simulated advertising environment for the training of a reinforcement learning agent
- Used RL algorithms to create an intelligent bidding agent capable of learning user behavior based on browsing data
- Created DDPG agent that was able to optimize the cost per acquisition of an advertising campaign, respond to changing reward signals within the environment and stay within a budget constraint, all novel innovations

Attune Inc, Remote CA

Sep 2022 – Dec 2022

Machine Learning Engineer (Contract)

Trained deep learning models for unsupervised anomaly detection on multidimensional time data from air quality sensors

PROJECTS

Voculator (Launchpad) - 2023

- Lead a team of machine learning developers to build an unsupervised speech generation and classification model
- Used neural audio codecs as a representation and trained CNN and transformer models to generate speech

Independent ML Research - 2021

- Published the first Deep Reinforcement Learning approach to solve the Newsvendor model, a classic economics problem
- Developed a policy gradient model that proved to match the analytical solution to the problem Arxiv

Center for New Music and Audio Technologies (CNMAT) Research – 2022, 2021

• Built rendering software using ThreeJS to animate real-time data from a mocap suit in 3-D on an artistic remote server

SKILLS

- Machine Learning: Transformers, diffusion, simulators, agents, GPU inference, reinforcement learning, LLMs, VLMs
- Languages: Python, Java, HTML, Javascript, SQL, MATLAB, Swift, Scheme, C, C++, Go, shell
- Technologies: Pytorch, ROS, IsaacGym, Pandas, React, GraphQL, Git, AWS Athena, ThreeJS, Xcode, advanced Excel
- Math: Strong math competition experience, 2x AIME qualifier, 2x AMC school winner out of 4000 students