Danny Tran

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Education

University of California, Berkeley **Aug. 2021 – Present**
Bachelor of Arts in Computer Science - GPA: 3.938 *Berkeley, CA*

Relevant Coursework

- Deep Neural Networks
- Deep RL
- Computer Vision
- Machine Learning
- Optimization
- Probability
- Computer Graphics
- Algorithms
- Vector Calculus

Publications

EgoPet: Egomotion and Interaction Data from an Animal's Perspective | *EECV 2024*

- We introduce EgoPet, a new egocentric video dataset of various animals. We define two in-domain benchmark tasks that capture animal behavior, and a third benchmark to assess the utility of EgoPet as a pretraining resource to robotic quadruped locomotion.

Experience

Berkeley Artificial Intelligence Research Lab **Jan. 2023 – Present**
Undergraduate Researcher *Berkeley, CA*

- Experience with Masked Auto Encoding for Image and Video Generation in the context of prompting via inpainting.
- Experience with internet scale dataset of Egocentric Animal videos. Worked on Animal Visual Interaction prediction and Locomotion Prediction prediction from Internet Videos.

CS61B (Data Structures and Algorithms) Course Staff **Jan. 2022 – May 2022**
Academic Intern *Berkeley, CA*

- Guided students through labs and projects.
- Presented lab material and create a demonstration for lab.

S&R Resources **May 2020 – Aug. 2020**
Front End Developer Intern *Chatsworth, CA*

- Developed a new company website using HTML, CSS, and JavaScript. Implemented S&R's requests in the website design/UI.
- Included multiple pages, various links, particular sizing, and a responsive design.

Projects

Reinforcement Learning in Bus Bunching | *Python* **Aug. 2023 – Present**

- Applying Deep Reinforcement Learning to Bus Bunching.
- Exploring the impact of Domain Randomization on training Bus Agent.
- Exploring PPO and various different RL algorithms. Furthermore, exploring various model variations such as incoporating transformers.

CT Scan Gender Classification | *PyTorch, Grad-Cam* **Dec. 2022 – June 2023**

- Designed deep neural networks for classifying gender from CT scans.
- Experimented with various CNNs models and Vision Transformers to get best results.
- Achieved an accuracy of approximately 80%.
- Implemented and analyzed Grad-Cam visualizations in order to determine facial features.

NLP Processing Improvements | *Python* **Aug. 2022 – Nov. 2022**

- Implemented various improvements to an NLP notebook on determining abnormality from medical report.
- Experimented with Data Augmentation using NLPAUG and balancing the abnormal cases of the training set.
- Examined different classification methods and performed hyperparameter search.

Technical Skills

Languages: Python, Java, C++, HTML/CSS, JavaScript, SQL
Technologies/Frameworks: PyTorch, NumPy, CVXpy, Matplotlib, Git, JUnit