TEJAS KAMTAM

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EDUCATION

University of California, Los Angeles (UCLA) **Los Angeles, CA**
B.S. in Computer Science *Sep 2021 – Jun 2024*

- **Cumulative GPA**: 3.33 / 4.00
- **Languages**: Python (TensorFlow, PyTorch), C++, JavaScript (React, TypeScript), Bash, x86-64
- **Certificates**: DeepLearning.AI - TensorFlow Developer; Microsoft 98-364 – Database Administrator

EXPERIENCE

AI Safety Corporation at UCLA 501(c)(3) **Los Angeles, CA**
Director of Projects and Workshops *Jun 2022 – Present*

- Led the development of Natural Language Processing (NLP) undergraduate research workshop over the course of 6-8 weeks to create a Sentiment Analysis model of Twitter tweets by fine-tuning Google's BERT LLM to better understand Transformer architectures and hyperparameter training of state-of-the-art AI
- Collaborated with students across the world at a Global Challenges Project (GCP) workshop at UC Berkeley to plan an inter-collegiate AI Ethics and Alignment research symposium for the Summer of 2023

Innexgo LLC **San Jose, CA | Remote**
Backend Engineer *May 2022 – Dec 2022*

- Developed the backend for a primary React webapp using Rust on a microservice architecture to operate on received and transmitted commands over WebSocket and HTTP for a network of RFID card scanners
- Created SQL query schemas using PostgreSQL. Implemented multiple microservices on AWS EC2 instances to assemble attendance reports presented on the React webapp using a RESTful API

PROJECTS

CarMeet – Social Media Web App **Los Angeles, CA**
ML & Fullstack Engineer (Python TensorFlow 2.0/JS, React) *Oct 2022 – Dec 2022*

- Engineered a social media web application for car enthusiasts to meet, organize, and communicate by mimicking dating-app functionality using the MERN (MongoDB, Express, React, Node.js) technology stack
- Developed a robust Binary Image Classifier using Python via TensorFlow 2.0 and JS to detect the presence of cars in images uploaded to the web app with a 97% validation accuracy over 20 epochs
- Integrated the MongoDB database to the backend Express server (local) to dynamically update data on the home, profile, and message inbox pages by incorporating server-side hooks and Axios/Express APIs

Bruin Spacecraft Group – Low-Orbit Satellites & Weather Balloons (HABs) **Los Angeles, CA**
Overseer Chief Engineer (Python, C++) *Sep 2021 – Present*

- Developed software in C++ to analyze star position and orientation for the operation of a 3-unit cube satellite in Low-Earth orbit hosting a Xenon ion for an on-campus aerospace and propulsion research lab
- Designed a Python program hosted on a Raspberry Pi to analyze GPS data collected aboard a High-Altitude Balloon (HAB) to transmit data packets to HQ and initiate cutdown for parachute deployment

50whales - Humpback Whale Image Classification **Los Angeles, CA**
Machine Learning Researcher (Python, PyTorch) *Jan 2022 – Mar 2022*

- Worked with a group of 3 to develop a machine learning model to accurately classify over 25,000 whales into 5,000+ categories by integrating a Siamese convolutional neural network
- Incorporated transfer learning from ResNet18 and preprocessing techniques including object detection, image segmentation, color masks (grading, grayscale, etc.) in Pytorch using Pillow
- Achieved a 32% validation accuracy on the first epoch (cross-entropy) and utilized an Adam optimizer with a triplet loss to work up to a 65%+ accuracy across 10+ epochs

SKILLS

Proficient: Python (TensorFlow, PyTorch, NumPy), C++, C, React, JavaScript (NodeJS)
Experienced: Rust, PostgreSQL, MongoDB, Express, Next.js
Interests: AI Safety and Alignment, Effective Altruism, Financial time series forecasting, NLP/NLU