Jeffrey Hoang

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github.com/jeffreyhoang | jeffreys-portfolio.onrender.com

Education

California State Polytechnic University, Pomona, Bachelor of Science in Computer Science   August 2022 – May 2026

- **GPA**: 3.91
- **Relevant Coursework:** Machine learning and its Applications, Artificial Intelligence, Numerical Methods and Computing, Software Engineering, Object-Oriented Programming, Design and Analysis of Algorithms, Data Structure Advanced Programming
- **Awards**: Dean's List and President's List all semesters

Experience

Student Research Assistant   August 2024 – Current

Computational Intelligence Lab in Department of Computer Science, Cal Poly Pomona, CA

- Developed web-based automation tools to control multi-camera GoPro setups using Python and the OpenGoPro API, supporting USB, Bluetooth (BLE), and WiFi protocols for seamless multi-device coordination
- Built REST APIs and control logic to manage camera operations (start/stop recordings, power cycles, data transfer), increasing experiment efficiency
- Benchmarked and evaluated open-source libraries (EasyMocap, pose2sim) for 3D motion reconstruction, identifying the most accurate pipeline for integration

Machine Learning Research Intern   May 2024 – August 2024

STARS Program, Cal Poly Pomona, CA

- Conducted research on multi-view geometry and markerless human pose estimation using multiple calibrated cameras
- Built a full-stack Django web application that automated the EasyMocap pipeline, including intrinsic/extrinsic calibration and 3D human pose reconstruction from multi-view video input
- Processed large video datasets and generated calibration parameters for downstream pose reconstruction tasks

Projects

AesthetiqAI – AI-Powered Custom Phone Case Platform   Summer 2025 – Current

Personal Startup Company | Django, React, Stripe API, OpenAI API

- Built and deployed a full-stack e-commerce website using Django and React that allows users to generate AI images from text prompts and preview them on phone cases available for purchase
- Integrated REST APIs, including OpenAI's image generation API for AI-powered visuals and Stripe API for secure checkout and payment processing
- Implemented user authentication, account management, cart functionality, order tracking, and real-time image overlay, demonstrating end-to-end ownership of frontend, backend, and business logic

Human Motion Reconstruction Web Application   Summer 2024

Computational Intelligence Lab in the Department of Computer Science at Cal Poly Pomona

- Automated intrinsic/extrinsic calibration and pose reconstruction using EasyMocap and Django
- Developed audio-based multi-camera sync script using librosa, ffmpeg, numpy, and matplotlib
- Enabled automated camera control via OpenGoPro API (BLE, WiFi, USB)

Machine Learning, HTGR Project   Fall 2023

Software Engineering Society, Cal Poly Pomona, CA

- Co-led a team of 5 in developing a time-series classification pipeline for predicting sudden car movements using multi-axis accelerometer data
- Implemented and tuned Support Vector Machine (SVM) models using scikit-learn with One-vs-Rest strategy and achieved 90%+ accuracy
- Performed data preprocessing, feature scaling with StandardScaler, and cross-validation to improve generalization

Relevant Skills

Technologies: Python, Java, JavaScript, HTML, CSS, React.js, Django, Flask, Pytorch, Scikit-learn, Numpy, Keras, Matplotlib, Librosa, Blender, RealityCapture, ffmpeg, Git, VSCode, Unity

Soft Skills: Adaptability, Communication, Attention to Detail, Problem Solving, Time Management