

Jeffrey Hoang

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Education

California State Polytechnic University, Pomona Bachelor of Science in Computer Science	Aug 2022 - Current GPA: 3.91/4.0
<ul style="list-style-type: none">• Expected Graduation Date: Dec 2025• Relevant Coursework: Machine Learning, Artificial Intelligence, Numerical Methods and Computing, Software Engineering, Design and Analysis of Algorithms, Data Structure Advanced Programming, Database Systems• Awards: Dean's List, President's List	

Experience

Student Research Assistant Computational Intelligence Lab Department of Computer Science at Cal Poly Pomona <i>Supervisor: Dr. Hao Ji, Ph.D., Associate Professor</i>	Aug 2024 - Current
<ul style="list-style-type: none">• Developed web-based automation tools and REST APIs to control multi-camera GoPro setups using Python, OpenGoPro API, and USB/BLE/Wi-Fi protocols, increasing data collection efficiency.• Trained deep neural networks for 3D keypoint detection on the Human3.6M dataset using TensorFlow on NVIDIA A100 GPUs across high-performance computing (HPC) clusters, incorporating batch normalization, ReLU activation, dropout, and linear layers to improve accuracy and generalization.• Developed a physics-based pipeline fitting Metrabs 3D keypoint predictions to biomechanical Locomujoco models, applying forward kinematics and optimization to estimate joint angles and body scaling parameters for anatomically consistent and physically accurate 3D human pose alignments.	
Lead Software Engineer – Project Sloka Newtonianisotope Pomona, CA <i>Supervisor: Dr. Fatemeh Jamshidi, Assistant Professor, Ph.D.</i>	May 2025 - Current

Machine Learning Research Intern – STARS Program Computational Intelligence Lab Department of Computer Science at Cal Poly Pomona <i>Supervisor: Dr. Hao Ji, Ph.D., Associate Professor</i>	Jun 2024 - Aug 2024
<ul style="list-style-type: none">• Conducted research on multi-view geometry and markerless human pose estimation using multiple calibrated cameras, developing a pipeline based on existing research to automate intrinsic/extrinsic camera calibration, multi-view video preprocessing, keypoint detection, and 3D pose reconstruction.• Implemented an audio-based multi-camera synchronization system using Librosa, FFmpeg, and NumPy to align multi-view recordings for accurate reconstruction.• Presented research at the Creative Activities and Research Symposium (CARS) at Cal Poly Pomona to peers and faculty.	

Projects

Machine Learning – HTGR Project Software Engineering Society Cal Poly Pomona	Aug 2023 – Dec 2023
<ul style="list-style-type: none">• Directed a small team in developing a time-series classification pipeline for predicting sudden car movements using multi-axis accelerometer data.• Implemented and optimized Support Vector Machine (SVM) models with a One-vs-Rest strategy in scikit-learn, achieving over 85% classification accuracy.• Performed data preprocessing, feature scaling, and k-fold cross-validation to improve model generalization.	

Skills

Technologies: Python, Java, SQL, Django, Next.js, React.js, TailwindCSS, Pytorch, Tensorflow, Keras

Soft Skills: Problem Solving, Analytical Thinking, Collaboration, Time Management, Adaptability