

Illy Hoang

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Languages	Python, C, C++, Java, JavaScript, PHP, TypeScript, Bash, Ruby, Swift, Kotlin
ML & CV	TensorFlow, Scikit-Learn, NumPy, Pandas, Matplotlib, Keras, PyTorch, OpenCV, HuggingFace
Software	React Native, FastAPI, NextJS, VueJS, Angular, Flask, Django, NodeJS
Technologies	Git, Docker, WordPress, AWS, Xcode, SQL, MongoDB, PostgreSQL (Supabase), VSCode
Interests	Running, Hiking, Boxing, Nutritional Sciences, Computer Vision/Robotics

EDUCATION

University of Southern California	Expected May 2027
Master of Science in Computer Science	
■ Relevant Coursework:	Deep Learning and its Applications, ML, Foundations of AI, Analysis of Algorithms
University of Connecticut	Aug 2021 – May 2025
Bachelor of Science in Computer Science, Minor in Mathematics	
■ Honors:	Ronald E. McNair Scholar, UConn Gamma Delta Chapter Alpha Alpha Alpha National Honor Society

EXPERIENCE

Savant Systems	Remote
Software Engineer Intern	Aug 2024 – May 2025
■ Engineered UI components in React Native IoT application, resolving high-priority defects to improve UI/UX	
■ Architected backend data extractor with Node to streamline synchronization tools with AWS cloud infrastructure	
■ Optimized mobile performance for facilitating real-time communication between hardware and cloud services	
Infosys Limited	Hartford, CT
InStep Intern - AI Research	May 2024 – Jul 2024
■ Researched LLM vulnerabilities by assessing GPT response quality against novel prompt injection attacks	
■ Documented mitigation strategies for secure LLM deployment in enterprise environments	
■ Earned certifications in Ethical AI governance, prompt engineering, and Cloud security principles	

LEADERSHIP

USC Advanced Robotic Combat Club	Los Angeles, CA
Computer Vision Lead	Sep 2025 – Present
■ Architected a real-time Multi-Object Tracking pipeline utilizing YOLO11 backbone for high-precision targeting with sub-30ms latency	
■ Integrated Segment Anything Model with Optical Flow, significantly reducing id-switching and tracking drift	
■ Engineered an integrated dashboard visualizing video streams, confidence scores, and real-time telemetry, reducing debugging time during competitions	

PROJECTS

AI Player Bot for Vietnamese Poker	Sep 2025 – Present
■ Designed agent using minimax-optimized alpha-beta pruning, reducing branch search by 40% per turn	
■ Implemented a host controller to manage 4-player turns, validate plays, and determine win conditions	
■ Simulated algorithm against random and greedy policies to assess environment stability and consistency	
Fine-Grained Silhouette Classification for Pokémon Recognition	Sep 2025 – Dec 2025
■ Fine-tuned ResNet-18 model for silhouette-based recognition on 3,197 silhouette images and 819 distinct labels	
■ Achieved 98% for both training and validation accuracy, validating transfer learning in silhouette recognition	
■ Architected a rapid indexing/retrieval framework using Nearest-Neighbor search and Cosine Similarity hashing	
BERT for Spatial-Temporal Motion Prediction	Oct 2024 – Feb 2025
■ Adapted BERT-based architecture by treating spatial coordinates as discrete tokens in a sequence modeling task	
■ Designed parallelized feature extraction with multiprocessing to accelerate dataset initialization	
■ Implemented multi-task architecture with separate decoders for position classification and coordinate regression	
■ Achieved roughly 70% accuracy, F1 and precision for classification and 3 yard MAE for regression	