

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