Jack Chang

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EDUCATION

University of California, Irvine June 2026

Bachelor of Science in Computer Science

Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Computer Vision, ML & Data Mining, Graph Algorithms, ML Optimization, Systems Programming

TECHNICAL SKILLS

Languages: C++, Python, Java, JavaScript, TypeScript, HTML/CSS
Frameworks/Libraries: PyTorch, TensorFlow, scikit-learn, OpenCV, NumPy, FastAPI, OpenAI API, React, Node.js, Electron.js
Databases & Tools: Supabase, Docker, CMake, GitHub Actions, Git

EXPERIENCE

AI Tech Knowledge (applied AI consulting startup) Jun 2023 – Sep 2024

Part-Time Software Engineer

- Increased throughput for scheduling optimization workloads by **50%+** by developing multithreaded **C++/Python** modules with **Google OR-Tools**
- Saved **20+ minutes per release** by implementing GitHub Actions CI/CD pipelines for automated Windows/macOS build and installer distribution across **6 GitHub repositories**
- Enabled Windows/macOS deployment by building a cross-platform **Node.js** desktop service to queue, execute, and monitor AI model inference tasks
- Improved reliability of user-server authentication by building an **Electron.js/Supabase** login app with session persistence, logout handling, and secure token handoff to the background solver service

MetaGuru (enterprise digital transformation provider) Jun 2023 – Nov 2023

Research Scientist Intern

- Reduced repetitive HR policy lookup by **10%** by developing a GPT-4 powered internal Q&A assistant for company policy and employee support
- Improved LLM product direction by evaluating **3 deployment approaches** across prompt engineering, fine-tuning feasibility, and multilingual behavior

NexStream Technical Education (STEM education startup) Jan 2022 – May 2023

Curriculum Developer & Instructor

- Expanded CS course offerings by developing and teaching **5 Python-based courses** covering Pygame and USACO algorithms
- Improved beginner learning outcomes by designing **20+ project-based lessons** that broke programming and algorithm concepts into interactive exercises

Intern Programmer & Data Scientist

- Tracked **20+ course activity events** with a **JavaScript xAPI** backend and Watershed LRS to visualize student learning
- Reduced manual course review time by **3+ hours weekly** by developing **Python** analysis tools for student progress and open-ended response accuracy

Good Trouble (accessible games technology startup) Oct 2022 – Mar 2023

Gameplay Programmer Intern

- Reduced projectile performance overhead by **50%** by using object pooling for reusable weapon systems across PC and Xbox-focused gameplay
- Implemented weapon aiming, projectile behavior, and controller interaction systems for an unreleased combat racing game using **Unity + C#**

PROJECTS

AI Chess Commentary Generator (project lead) Feb 2026 – Apr 2026

- Generated **3.9M+** synthetic chess commentaries from **197K+** FEN positions by extracting **27 engine-derived chess features** to translate engine signals into grounded move explanations
- Fine-tuned a T5-small seq2seq model and evaluated it against GPT-4o-mini on **1,000 positions**, earning **69.6%** Gemini-2.5 Flash LLM-judge preference and **73.7%** human preference from chess players

Orion: AI Threat Assessment System (sole developer) Apr 2026 – May 2026

- Created an AI decision-support simulator that combines a deterministic **C++ scoring engine**, a **Python ML ensemble**, and **LLM/RAG explanations** to assess **9 airborne and orbital threat scenarios** using live public data sources