JACK CHANG
PROGRAMMER

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EDUCATION

University of California, Irvine
B.S. Computer Science
Class of June 2026

RELEVANT COURSEWORK

Computational Photography/Vision
Software Testing & Quality Assurance
Machine Learning & Data Mining
Intro to AI
Systems Programming
Graph Algorithms

TECHNICAL SKILLS

Languages:
Python, C++, Java, C# + Unity,
NodeJS, ElectronJS

Frameworks/Tools:
Supabase, Google OR-Tools, Git,
Linux, Windows

Other Core Skills:
Algorithms, backend development,
multithreading, optimization,
cross-platform desktop apps

HONORS/AWARDS

Eagle Scout
C++ Professional Certification
CompTIA A+ Certification
USA Computing Olympiad Gold

HOBBIES

Chess; rated 2200 on chess.com
Jazz guitar player
Hiking

WORK EXPERIENCE

Software Engineer
AI Tech Knowledge (June 2023 - September 2024)
- Built a cross-platform Node JS/Electron JS desktop service (Windows + macOS) to queue and execute AI model inference tasks for a scheduling platform
- Developed backend optimization modules in C++ & Python using Google OR-Tools, with multithreading to reduce solver runtime
- Designed an Electron JS authenticator app integrated with Supabase, improving login flow and reducing authentication errors
- Implemented automated CI/CD pipelines using GitHub Actions for multi-OS build distribution (macOS + Windows)

Research Scientist
MetaGuru (June 2023 - November 2023)
- Researched the capabilities of ChatGPT, possible training and modifications, and cross language limitations
- Developed a preliminary language model in Python using OpenAI's GPT-4 API that is capable of answering internal company questions and reducing manual HR load

Intern Game Programmer
Good Trouble (October 2022 - March 2023)
- Gained practical experience in gameplay programming and enhanced my C# & Unity mastery, problem-solving + debugging competency, and communication skills
- Designed and created the aiming system and UI menu for a car racing and shooting game for the PC and Xbox platforms, using Unity's new input system, and object pooling to optimize projectiles

Curriculum Developer & Instructor
NexStream Technical Education (May 2022 - May 2023)
- Developed and taught an Introduction to Pygame & Advanced Pygame programming course in Summer 2022
- Developed and taught a Python-based Bronze level USA Computing Olympiad logic and algorithms courses in the 2022-2023 school year, and developed a Silver level course for Summer 2023

PROJECTS

Monte Carlo Tree Search Demo App (sole developer)
- Implemented a Monte Carlo Tree Search algorithm and built an interactive web demo to visualize tree expansion + rollout statistics
- Designed UI components to clearly display node values, visit counts, and decision paths

Minecraft Dungeons Plugin "ToastyPlugin" (project lead)
- Built a custom Java Minecraft plugin implementing new gameplay mechanics using event-driven logic
- Designed efficient systems for player actions, combat, and state updates in a multiplayer environment