

JACK CHANG

PROGRAMMER

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EDUCATION

University of California, Irvine

B.S. Computer Science

Class of June 2026

RELEVANT COURSEWORK

Computer Vision

Machine Learning & Data Mining

Intro to AI

Graph Algorithms

Systems Programming

PROFESSIONAL DEVELOPMENT

NVIDIA Developer Courses

Getting Started With Deep Learning

Intro to Transformer-Based NLP

Gen AI With Diffusion Models

TECHNICAL SKILLS

Languages & Frameworks:

Python, C++, PyTorch, TensorFlow, NumPy, OpenCV, Node.js, React

Systems & Software:

Algorithms, Multithreading, Optimization, Backend Systems, Cross-platform Applications

Tools:

Git, Linux, Windows, MacOS, Supabase

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 | C++, Python, Node.js, Electron.js, Supabase

AI Tech Knowledge (June 2023 - September 2024)

- Built a cross-platform **Node.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 | Python, OpenAI

MetaGuru (June 2023 - November 2023)

- Investigated capabilities of **large language models**, including prompt design, fine-tuning feasibility, and cross-language behavior
- 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 | C#, Unity

Good Trouble (October 2022 - March 2023)

- Implemented gameplay systems in **C# & Unity**, focusing on real-time input handling, object pooling, and performance-aware design
- Designed and built a weapon aiming system and UI menu for a cross-platform PC/Xbox combat racing game

Curriculum Developer & Instructor | Python

NexStream Technical Education (May 2022 - May 2023)

- Designed and taught **Python**-based programming courses covering game development fundamentals and algorithmic problem solving
- Developed curriculum for and taught a course on **USA Computing Olympiad** Bronze-level logic and algorithms, emphasizing **data structures** and reasoning skills

PROJECTS

Geometric Computer Vision Pipeline | PyTorch, NumPy, OpenCV

- Built an end-to-end computer vision pipeline for image alignment and panorama construction using **feature detection, homography estimation**, inverse warping, and blending
- Implemented robust feature matching with **ORB** and **RANSAC**, visualizing correspondences, inliers, and intermediate warping stages to validate alignment quality

Monte Carlo Tree Search Demo App | React, TailwindCSS

- 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