

Yinghao (Peter) Guan

(213) 312-5303 | peter@peterguan.com | peterguan.com
📍Yinghao-Guan | 🌐yinghao-guan

Education

Santa Monica College, Santa Monica, California Sept 2025 – Present

Computer Science

- Dean's Honor List; Alpha Gamma Sigma; CS Club

University of Edinburgh, Edinburgh, Scotland Sept 2022 – July 2024

Computer Science (Completed 2 Years)

- Related coursework: Software Engineering, Reasoning and Agents, Data Structures, Computer Systems, Logic

University of Auckland, Auckland, New Zealand Feb 2022 - Jun 2022

Finance & Engineering (Completed Coursework)

- Relevant coursework: Business, Economics, Markets, and Law

Technical Skills

- **Frontend:** React, Next.js, Tailwind CSS, TypeScript, JavaFX, UI/UX
- **Backend & Cloud:** FastAPI, Flask, Rust/Tauri, PostgreSQL, Firebase, Vercel, Netlify
- **Languages & Data:** Rust, C++, Java, Python, TypeScript, R, SQL, pandas, NumPy, scikit-learn, Stata
- **Tools:** Git/GitHub, Docker, GitHub Actions, Linux, DNS/domain management

Experience

HCI Research Collaboration | *Lead Student Researcher* Jul 2025 – Present

UCLA, Los Angeles, California

- Investigating the intersection of **Explainable AI (XAI)** and user trust, specifically focusing on emotional support LLMs.
- Designed and executed A/B testing frameworks to evaluate user empathy and trust across different AI transparency levels.
- Automated qualitative data extraction and sentiment analysis using Python, preparing for peer-reviewed publication as sole author.

SMC Hackathon (Student-Organized) | *Website Team* 2026 – Present

- Built full-stack system for a 100+ participant hackathon covering applications, judging, and outreach workflows.
- Implemented QR-based identity system for check-in, team formation, and event operations.

Website Coordinator | *Alpha Gamma Sigma Honor Society* Feb 17, 2026 – Present

Santa Monica College, Santa Monica, California

- Maintain the official society website and manage feature updates to keep the member experience reliable and current.
- Publish announcements, event schedules, and resources through the organization's main digital communication channel.
- Administer the digital member management system for onboarding, engagement tracking, and roster accuracy.

Veru: AI-Driven Academic Audit Platform (veru.app) | *Founder* Dec 2025 – Present

- Engineered a full-stack platform to automate academic paper auditing, leveraging a **FastAPI** backend and a responsive **Next.js** frontend.
- Developed a data pipeline integrating **Semantic Scholar** and **OpenAlex** APIs, using LLM-based verification to cross-reference citations and findings in real time.
- Successfully launched the MVP, achieving **100+ unique users within the first week**, as verified by Vercel Analytics.
- Optimized API performance through asynchronous request handling, maintaining sub-200ms response times.

Behavioral Modeling of Excessive Trading Jan 2024 – Apr 2024

- Architected the technical pipeline for a team research project analyzing how **behavioral biases** drive excessive trading behavior.
- Designed and executed a data-analysis workflow using R (**plspm**) for **PLS-SEM** modeling and Python (**pandas**) for data acquisition and preprocessing.
- Built a hybrid computational environment in **WSL**, integrating Python and R via **rpy2** to support cross-language statistical modeling.

Technical Projects

Academic DSL & Cross-Platform IDE Ecosystem

Aug 2025 – Present

- Created a specialized **Domain-Specific Language (DSL)** for academic document preparation, with custom grammar and syntax parsed via **ANTLR4**.
- Designed a system using the Visitor pattern to convert the AST to a Pandoc AST, enabling conversion to HTML and LaTeX.
- Implemented the application with an MVVM-style architecture and developed a desktop IDE using **Rust** and **Tauri**.

Web Technology Incubator (peterguan.dev)

2024 – Present

- Established a sandbox environment for experimental web features, including **React Server Components** and **Edge Functions**.
- Automated the deployment lifecycle via **GitHub Actions**, ensuring reliable updates and monitoring across experimental subdomains.
- Managed DNS, automated SSL renewal, and SEO optimization while maintaining a 100% accessibility score.

Ultra Marathon Runner Performance Analysis | *Independent Data Analyst*

Jan 2024 – Apr 2024

Foundation Data Science, University of Edinburgh, Edinburgh, UK

- Analyzed a Kaggle dataset of over 200,000 ultra-marathon records to identify long-term performance trends and athlete segments.
- Executed the workflow in Python using **pandas**, **matplotlib**, and **scikit-learn**, including **K-means** clustering across race categories.
- Compiled findings and visualizations into a professional report using \LaTeX .

Leadership & Competitions

HackCC Fall 2025 Hackathon | *Best AI/ML Prize Winner*

Nov 2025

HackCC, MiraCosta College, Oceanside, California

- Spearheaded the development of **RealIBuddy**, an AI-driven learning tool with real-time sentiment analysis and adaptive feedback.
- Orchestrated the technical workflow for a 4-person team and ensured seamless integration between the ML model and web interface.
- Implemented a visualization dashboard to provide users with actionable insights into learning progress.

Vision Hack | *Top 3 Overall*

Mar 2026

Vision Hack, Los Angeles, California

- Developed the backend for **Skillset LA**, an AI-powered career roadmap builder.
- Integrated Gemini and Adzuna APIs into the application workflow.

ETHGlobal x Encode London Web3 Hackathon

2023

London, UK

- Selected participant representing the University of Edinburgh in a competitive global Web3 hackathon.
- Completed a smart contract development project using **Solidity**.

Hack for Humanity 2026 | *Solaura*

Mar 2026

Santa Clara University, California

- Led a 4-person team to build a real-time spatial perception system designed to augment independence for visually impaired users.
- Developed the **iOS** application using **Swift** and ARKit, integrating **CoreML YOLOv8** for low-latency object detection.
- Engineered a lightweight **Python** backend for audio synthesis and state synchronization, and integrated **Gemini** and **ElevenLabs** for multimodal voice feedback.

Build with Gemini Hackathon (UCLA x Google DeepMind) | *Marketeer*

Mar 2026

UCLA Glitch, Los Angeles, California

- Built an end-to-end AI marketing campaign generator that produces logos, banners, jingles, video ads, and voiceovers from a single prompt.
- Designed and implemented an asynchronous multi-stage pipeline coordinating **5+ Gemini models** to enable parallel asset generation.
- Engineered a browser-first workflow with IndexedDB persistence and client-side media merging using **FFmpeg WASM**.
- Awarded **Runner-up (Top ~15%)** among 100+ teams.