Eric Tao

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EDUCATION

University of California, Irvine Expected Dec 2026
Bachelor of Science in Computer Science *Irvine, CA*
- **Cumulative GPA:** 3.75/4.0 | 5x Dean's Honor List

Relevant Coursework:
- Data Structures, ML and Data Mining, Databases, Web Applications, Python II/III, C/C++, Computer Architecture

EXPERIENCE

Siemens Jun 2025 – Present
AI Engineering Intern | *PLM and Battery Industry Solutions* *Remote*
- Authored a user-focused primer document to help customers and internal teams in the battery industry understand Siemens' Teamcenter AI and LLM integrations, illustrating how AI technologies help enhance PLM workflows.
- Documented and prototyped high-impact AI use cases within internal Teamcenter environments for battery applications, establishing a foundation for future development and enterprise-wide adoption.

UCI Computer Science Student Council Nov 2024 – Present
Software Developer | *API Engineering and Developer Infrastructure* *Irvine, CA*
- Contributed to the Anteater API, the official platform for delivering comprehensive, publicly available **UCI datasets**, handling **500,000+ API requests** per day to support student and faculty access to essential campus information.
- Engineered an **automated data pipeline** for real-time **library traffic analysis** with Node.js, PostgreSQL, and Drizzle ORM, leveraging **web scraping** and incremental aggregation to handle **1000+** traffic updates per day.
- Implemented cursor-based pagination in GraphQL and REST APIs, improving query efficiency, streamlining pagination UI support, and reducing API response times by **50%**.

TRL11 Jun – Oct 2024
Software Engineering Intern | *Aerospace and Embedded Systems* *Irvine, CA*
- Formulated a scalable **database migration framework** for SQLite and SQL schemas through SQLAlchemy and FastAPI endpoints, enabling recoverable version control for seamless data consistency across all systems.
- Overhauled recording architecture across **50+** interdependent modules by implementing **multi-disk recording** with automatic disk switching and **multithreaded** segment replacement for endless recordings. Increased video duration and resolution capacity by over **4x** while enhancing system reliability and recording information accuracy.
- Integrated **HTTPS** using an OpenSSL self-signed root certificate to secure data transmission with effortless protocol switching across **100+** multi-language URL/URI and API endpoints, verifying encryption integrity of HTTP and TCP packets with TLS/SSL protocols through Wireshark.

PROJECTS

CleanCompass | *Python, OpenAI API, React, Google Cloud, Flask, Git* Jan 2025
- Constructed a sustainability-focused **travel planning web application** that calculates optimized itineraries based on user preferences for cost, time, and location, generating **27%** lower carbon emissions per trip on average.
- Integrated OpenAI API with Flask to analyze optimal travel routes and eco-friendly transportation methods.
- Designed an intuitive React frontend, utilizing the Google Maps API to visualize routes with transportation modes.

BruinBuddy | *Python, Google Gemini API, Reflex, Google AI Studio, Git* Apr 2024
- Developed a message-based web application with a real-time AI chatbot dedicated to anti-bullying support.
- Trained the Google Gemini Large Language Model to provide empathetic, friendly, and human-like responses, leveraging Reflex to create a messaging-based user interface with intuitive messaging components.
- Led integration of backend AI, context awareness, analytical data generation, and training queries.

TECHNICAL SKILLS

Languages: Python, TypeScript, SQL, C/C++, JavaScript, Java, HTML/CSS, GraphQL, Assembly, C#, R
Technologies: React.js, FastAPI, SQLite, PostgreSQL, MySQL, Node.js, Flask, Drizzle ORM, Pytest, FFmpeg, GStreamer
Tools: Git, Docker, Kubernetes, AWS EC2, Linux, Google Cloud, Wireshark, Visual Studio, VS Code, JetBrains