

# Eric Tao

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## EDUCATION

### University of California, Irvine

Bachelor of Science in Computer Science

Cumulative GPA: 3.7/4.0 | Dean's Honor List

Expected Jun 2026

Irvine, CA

#### Relevant Coursework:

- Data Structures, Python II/III, C/C++, Linear Algebra, Computer Architecture, Discrete Math, Intro to Software Engineering, Discrete Structures, Boolean Algebra, CS Statistics

## EXPERIENCE

### TRL11

Software Engineering Intern | Aerospace and Embedded Systems

Jun 2024 – Present

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**.

### Microsoft

University Shadowship Program Mentee

Apr – May 2024

- Directly communicated and engaged with two Microsoft Software Engineers to understand core industry practices and methodologies, garnering vital insights into effective software development processes.
- Received personalized guidance on educational and career trajectory planning, aligning coursework with emerging industry trends, and competitive positioning amongst student and intern peers.

## PROJECTS

**BruinBuddy** | Python, Google Gemini API, Reflex, Google AI Studio, Git

Apr 2024

Backend Software Developer

- 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.

**Speechalytics** | React, JavaScript, HTML/CSS, Flask, Git

Jan 2024

Frontend Software Developer

- Constructed a web application aimed at evaluating presentation speaking skills with accurate **speech transcription** and a detailed **assessment model**.
- Designed **web interfaces** utilizing **React**, **HTML**, and **CSS**, and contributed to refinement of assessment algorithm.
- Built with Flask, Deepgram API, ProWritingTools API, and FFmpeg to transcribe and assess speech.

## TECHNICAL SKILLS

- **Languages:** Python, Java, C/C++, SQL, JavaScript, HTML/CSS, Bash/Zsh, Assembly, C#, R
- **Frameworks/Libraries:** React, Pytest, SQLAlchemy, SQLite, FastAPI, OpenSSL, Reflex, FFmpeg, GStreamer, Flask
- **Developer Tools:** GitHub/Git, VS Code, Linux, Docker, PyCharm, Unity, Visual Studio, Wireshark, Eclipse, Trello

## AWARDS AND HONORS

- **LinkedIn Skills Assessment Badge** | Python
  - **Top 5%** of 5,000,000 examinees
- **Unity Certification Award** | Unity Certified User: Programmer

Dec 2023

May 2022