

Ethan Liu

ethan2000liu@gmail.com <https://www.linkedin.com/in/ethanwliu/> ethan2000liu.github.io

WORK EXPERIENCE

Apple Cupertino, California
CoreOS Software Engineer (CE) Jul 2023 - Nov 2023

- Developed a Splunk query to identify over 63 persistent failures within the system. Reported more than 250 bug reports for software builds.
- Conducted livability testing, blackbox testing, and triaging for devices on all Apple platforms saving 9 hours per test cycle.
- Improved overall testing efficiency by integrating XCTest frameworks with Python automation, leading to a 30% time reduction in test execution cycles.
- Collaborated with cross-functional teams to integrate the Python script with existing monitoring tools, leading to a 75% improvement in overall pipeline health visibility and proactive issue resolution.

Apple Roseville, California
Tech Advisor Jun 2022 - Feb 2024

- Researched and resolved complex technical issues for Apple customers, resulting in a 90% customer satisfaction rate and a 20% decrease in call escalation to senior support.
- Documented detailed troubleshooting processes for common Apple product issues, reducing average handling time by 10% and improving overall team efficiency.
- Collaborated with cross-functional teams to implement new communication protocols between tech advisors and engineers, leading to a 15% increase in bug resolution speed.

RenEnergy Rancho Cordova, California
Fullstack Developer Intern Mar 2022 - Aug 2022

- Led a team of interns in developing and deploying a robust data validation API server using JavaScript, TypeScript, and the Node.js framework. This resulted in a 40% improvement in data accuracy and efficiency metrics.
- Automated data validation processes for API server responses, leading to a 60% increase in data integrity and a 90% reduction in manual error rates.
- Designed and implemented a new data validation process that boosted database accuracy by 30%.
- Collaborated with fullstack developer to ensure seamless integration of the data validation API into the existing application stack.

Purple Cow Agency Cameron Park, California
Data Engineer Jul 2020 - Dec 2020

- Structured and organized client data for 200+ customers, utilizing advanced Excel functions and MySQL databases, resulting improve of data quality.
- Utilized Tableau to analyze client data, identifying key trends and correlations that led to a 15% increase in client retention rates.
- Implemented ELT pipelines to efficiently process client data, leading to a 30% decrease in data processing time and enabling real-time analytics for improved decision-making.

FindersTree Placerville, California
Software QA Specialist Sep 2018 - May 2022

- Executed thorough exploratory and automated testing of SaaS websites using Selenium in Java, resulting in a 20% decrease in critical bugs.
- Documented and diagnosed bugs found during testing process, resulting in a 15% reduction in overall bug resolution time and improving the user experience.
- Conducted manual testing on website functionality and security measures, identifying and rectifying 6 critical vulnerabilities.

NETWORK Sound Sacramento, California
Embedded Software Engineer Intern Nov 2019 - May 2020

- Collaborated with hardware engineers to conduct testing on the embedded software, achieving a 98% success rate in connection stability and compatibility with various devices.
- Revamped the ESP32 coding structure in C, leading to a 30% improvement in system performance and a 25% reduction in overall energy consumption.
- Collaborated with cross-functional teams to integrate CAPWAP and IAPP protocols into the software system, enhancing network performance by 30%.

EDUCATION

California State University-Sacramento Sacramento, California
B.S. Computer Engineering Graduation Date: May 2023

PROJECT EXPERIENCE

Freelance Work

Machine Learning Trainer - Data Annotation

Springtown, Texas

Feb 2024 - May 2024

- evaluate the code quality produced by AI models for correctness.
- Assist in developing an AI chatbot by providing diverse problems and solutions for coding challenges.

Freelance Work

Webmaster - Elevated Transmission

Springtown, Texas

Mar 2024 - Jul 2024

- Developed and depolyed HTML based website.
- Developed and implemented interactive website features using HTML, resulting in a 20% increase in online customer engagement metrics.
- Oversaw regular updates and maintenance of the website.

Freelance Work

Webmaster - SpartanMMA

Springtown, Texas

Mar 2024 - Jun 2024

- Utilized CSS and Word Press to develop a visually appealing and user-friendly website for SpartanMMA, resulting in a 40% increase in online enrollment for martial arts classes.
- Collaborated with martial arts instructors to create engaging content for the website, resulting in a 25% increase in overall student retention rates.100%2/3

Personal Project

AI Story Teller

Roseville, California

Feb 2024 - Mar 2024

- Innovatively developed an AI Storyteller app, seamlessly integrating computer vision and NLP technologies.
- Demonstrated expertise by leveraging HuggingFace's Transformers for image-to-text and integrating GPT-2 for creative story generation.
- Utilized Python, ML, and deep learning techniques to develop a chatbot using the OpenAI API for NLP tasks

Group Porject

Search and Rescue using AI/ML

Sacramento, California

Jan 2023 - May 2023

- Implemented Raspberry Pi project to locate and rescue individuals in remote areas with low visibility.
- Developed a program in C to fetch real-time GPS coordinates and thermal camera images.
- Leveraged Python to build robust SMS communication capabilities, enabling features like two-way messaging, automated notifications for improved user experience.
- Developed embedded software that acts as a hub for all of the components.

Group Porject

Measure Soil Moisture using Microcontroller

Sacramento, California

Sep 2021 - Dec 2021

- Utilized C programming language to develop firmware for interfacing with GPIO pins, enabling accurate capture of moisture levels in soil for agricultural monitoring systems.
- Utilized C programming language to optimize the efficiency of the finite state machine decision-making process, increasing speed by 40% and reducing response time to critical events by 50%.
- Collaborated with hardware engineers to integrate Bluetooth technology into the embedded software, allowing for remote monitoring of soil moisture levels on mobile devices, increasing accessibility by 30%.

Group Porject

Homework Helper SaaS

Rancho Cordova, California

Jan 2021 - May 2023

- Utilized Python and Node.js to create a Discord bot that provided real-time assistance to students with homework and test questions, resulting in a 90% increase in user engagement.
- Cultivated a diverse and inclusive online community by actively engaging with members, resulting in a 40% increase in daily active users on the Discord server, reaching over 250 students.
- Developed an automated bot using Python to receive user requests and scrape data from Chegg, resulting in a 70% decrease in manual data retrieval time.

Personal Project

AI Story Painter

Roseville, California

Feb 2024 - Mar 2024

- Innovatively developed an AI Story painter app, seamlessly integrating computer vision and NLP technologies.
- Demonstrated expertise by leveraging HuggingFace's Transformers for image generation and integrating LLM.
- Demonstrated proficiency in various machine learning models by hosting and managing a project on GitHub. This project showcased best practices in version control.

Personal Project

YouTube Rebuilt

Roseville, California

Jan 2024 - Feb 2024

- Conceptualized and designed a video-sharing platform inspired by YouTube, featuring functionalities like video viewing, channel browsing, and commenting reading.

- Implemented key features for a video-sharing platform, including fetching video data (views, likes, channels), enabling a robust search functionality, and categorizing videos for efficient user navigation.
- Prioritized user experience by focusing on an intuitive interface, efficient content delivery, and user engagement features.

Personal Project

Roseville, California

React Live Chat

Jan 2023 - Jan 2023

- Troubleshoot and debugged to ensure seamless user experiences, showcasing proficiency in full-stack development and effective problem-solving.
- Implemented user authentication, socket connections, and real-time messaging with features such as group chats, direct messages, and file attachments.
- Developed a real-time chat application using Node.js, React.js, and ChatEngine.io, featuring functionalities like private messaging and real-time message updates.

Group Project

Roseville, California

Pokemon Index

Nov 2023 - Dec 2023

- Implemented advanced data visualization techniques within the web app to showcase Pokémon details, leading to a 30% increase in average session duration.
- Utilized React to create a dynamic and user-friendly web application that fetched data from PokeAPI, providing detailed information on over 1000 Pokémon species.
- Implemented responsive design features to ensure optimal user experience across various devices, resulting in a 90% increase in overall user engagement.

Personal Project

Rancho Cordova, California

School Database Management

Sep 2020 - Dec 2020

- Developed complex SQL queries to optimize database performance, resulting in a 20% increase in data retrieval speed.
- Implemented automated data cleaning processes using Python scripts, streamlining the process, resulting in a more efficient and reliable database.
- Implemented personalized recommendation algorithms within the GE course selection tool, increasing student satisfaction by 90%

SKILLS

Programming Languages: Python, Swift, Java, JavaScript, C/C++, Bash, SQL

Operating Systems: macOS, iOS, Linux, Windows, Android, Chrome

Framework: React, Flask, Vite, FastAPI, Swagger

Software Tools: Git, Splunk, Docker, Selenium, Tableau

Hardware Tools: Verilog, VHDL

Apple Tools: PR3, Radar, TSTT, Quick, Xcode