Ethan Liu

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Technical Skills

Programming Languages: Python, Swift, Java, JavaScript, C/C++, Bash, SQL, Go
Operating Systems: macOS, iOS, Linux, Windows, Android, Chrome, UNIX
Framework: React, Flask, Vite, Fast API, Swagger, Tensorflow, openCV
Software Tools: Git, Splunk, Docker, Selenium, Tableau
Hardware: Tools: Verilog, VHDL
Apple Tools: PR3, Radar, TSTT, Quick, Xcode

Professional Experience

Founding Engineer - Zinley   Sep 2024 – Present

- Automated backend generation for users using **Supabase** by developing custom endpoints for project creation, **Postgres** database and table creation, policy enforcement, and essential table operations. Managed and tested endpoints with **Insomnia**.
- Developed **Go** backend with **Postgres** to store user settings, projects, prompts, and deployed projects. Used **Redis** to keep store deployed projects time to live (TTL) to track project expiration.
- Added Gemini custom multi-model LLM orchestration system with failover capabilities.
- Created Documentation and Statuspage websites for SnowX.io. Documentation website built using **Next.js** and **Slug**, Status website built using **Atlassian Statuspage** libraries.
- Created **API documentation** using **OpenAPI Spec/Swagger** for seamless developer integration.
- Produced and edited videos using **iMovie**, **CapCut**, and **Canva** to create tutorials and demos, enhancing user engagement and onboarding. Managed social media channels and executed targeted outreach initiatives, monitoring **user engagement** KPI to optimize **content strategy** and **increased interaction**.
- Collected user feedback from Discord and Reddit to drive decision-making, leading to enhanced features and improved user experience.

CoreOS Software Engineer (CE) - Apple   Jun 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 hours per test cycle.
- Improved overall testing efficiency by integrating **XCTest** frameworks with **Python automation**, leading to a 30% reduction in test execution cycles.
- Collaborated with cross-functional teams to integrate the Python script with existing monitoring tools, resulting in a 75% improvement in overall pipeline health visibility and proactive issue resolution.

Tech Advisor - Apple   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 escalations 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.

Fullstack Developer Intern- Ren Energy   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, resulting 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 a fullstack developer to ensure seamless integration of the data validation API into the existing application stack.

Data Clerk - Purple Cow Agency   July 2020 – Dec 2020

- Structured and organized client data for 200+ customers, utilizing advanced **Excel** functions and **MySQL** databases, resulting in improved 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.

Software QA Specialist - Finders Tree   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 the 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.

Embedded Software Engineer Intern - NETWORK Sound   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%.

Project Experience

C.H.O.N.K   Feb 2025 – Present

- Automated data collection using **DuckDuckGo API**, gathering 2400+ images across multiple categories.
- Developed robust **ETL** pipeline handling multiple formats with fallback mechanisms and error recovery.
- Implemented data validation system with multi-stage checks ensuring data quality and consistency.
- Developed a deep learning image classification system using **TensorFlow** and base model **ResNet50**.
- Implemented continuous learning system with user feedback, improving model accuracy over time.

Pokemon Index   Jan 2024 –Feb 2024

- Used **React** to develop a web app to fetch data from **PokeAPI** and display Pokémon details.

AI Story Teller   Nov 2023 – Jan 2024

- Innovatively developed an AI Storyteller app, seamlessly integrating computer vision and **NLP** technologies.
- Demonstrated expertise by leveraging **Hugging Face's Transformers** for image-to-text and integrating **GPT-2** for creative story generation.
- Proficient in **Python**, **ML**, and **deep learning** techniques, with additional capabilities showcased through **OpenAI** API for **NLP** tasks.

AI Story Painter   Nov 2023 – Jan 2024

- Innovatively developed an AI text-to-image app, seamlessly integrating computer vision and **NLP** technologies.
- Demonstrated expertise by leveraging **Hugging Face's** Transformers for image generation and integrating LLM.
- Comfortable with different models. Hosted and managed project on **GitHub**, highlighting version control practices.

Search and Rescue using AI/ML   May 2020 – May 2023

- Developed **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.
- Used Python for SMS communication and **OpenCV** and **Tensorflow** to assist with image processing.
- Developed embedded software that act as a hub for all of the components.

YouTube Clone   May 2022 – Jul 2022

- Developed a video-viewing platform resembling YouTube. Fetched video data (views, likes, channels), enabled search functionality, and categorized videos.
- User Experience: Focus on intuitive interface, efficient content delivery, and user engagement features.

React Live Chat   Mar 2022 – Jun 2022

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

School Database Management   Jan 2020 – Mar 2021

- Developed database with **MySQL** based on the information provided and data cleaning to achieve an organized and easy access database. The project helped over 80 students select their desired GE classes.

Measure Soil Moisture using Microcontroller   Jan 2020 – May 2020

- Developed embedded software in **C** to interface with **GPIO** for capturing moisture levels in soil.
- Implemented an analog-to-digital converter to display values on an **LCD** screen and make decisions using a finite state machine.

Homework Helper SaaS   Sep 2020 – Dec 2020

- Developed a Discord bot using **Python** and **Node.js** to assist students with homework and tests.
- Discord server grew to over 200+ students using the service.

Education

Georgia Institute of Technology   In Progress
M.S. Computer Science

California State University, Sacramento   Graduated 2023
B.S. Computer Engineering

Additional Information

Coursera: Machine Learning Stanford University**,** Mathematics for Machine Learning**,** Unsupervised Machine Learning**,** AI & Development by IBM, Relational Database and SQL**,** Google Data Analytics**,** Data Visualization with Tableau**,** Data Science by DeepLearning, Python for Data Science
Award: Dean's Honor, President award, Educational Excellence, Honors Student, Winner of ICPC, Winner of Data Fest Chico
Language: English **(**Native), Mandarin **(**Native), Japanese (Elementary)
Citizenship: United State and Taiwan