Ethan Liu

562-412-3749 | eliuusa@gmail.com | linkedin.com/in/ethan-liu- | github.com/WebForks | ethanliu.dev

EDUCATION

University of Pennsylvania — Philadelphia, PA
Masters of Science in Data Science — *Dec. 2025 – Present*

California State University Long Beach — Long Beach, CA
Bachelor of Science in Computer Science — *Aug. 2021 – May 2025*
- Courses: Application Development, Data Structures and Algorithms, Artificial Intelligence, Machine Learning

EXPERIENCE

Software Engineer — June 2025 – Present
Tone Software Corporation — *Anaheim, CA*
- Developed and deployed a Python web application that lets users run unit tests remotely from their browser on the mainframe (z/OS).
- Designed and shipped an AI documentation assistant: fine-tuned an LLM and implemented RAG over Tone product docs and IBM z/OS/ISPF procedures to guide customers and internal developers with step-by-step integration help and cited answers.
- Engineered C# dataset management supporting Tones DYNA-STEP (dynamic STEPLIB allocation and ISPF library management), enabling on-the-fly environment switching and multi-version access without logging off.
- Built a cross-platform C++ command-line utility for the mainframe that parses and extracts TrueType/OpenType font files from PDFs.

Software Engineer Intern — December 2024 – June 2025
Tone Software Corporation — *Anaheim, CA*
- Developed C# CLI tools to enhance GUI interfaces for seamless connectivity with IBM mainframe systems.
- Set up and configured a self-hosted MinIO S3 service on an Ubuntu server to support scalable and secure file storage solutions.
- Designed and implemented JCL scripts for IBM mainframes, enabling efficient file transfer operations between mainframes and the S3 service.
- Set up and configured an LDAP directory service in Docker containers on a Linux environment, centralizing authentication and streamlining user management.

Application Developer Intern — June 2023 – June 2025
Siemens Digital Industries Software — *Costa Mesa, CA*
- Converted OpenRoad and Perl user scripts from Ingress to PostgreSQL syntax for the PostgresSQL migration.
- Developed and integrated a Java SpringBoot REST API to enhance website functionality and user experience.
- Collaborated in the development and refinement of the website using Vue.js and Bootstrap, significantly improving usability and user interface design.
- Contributed to the integration of GPT technology for a user-assistance bot, enhancing website interactivity and providing comprehensive user documentation for improved user experience.

PROJECTS

Image Scraper | *Python, Docker, Selenium*
- Engineered a Python script for efficient extraction of .jpeg files from network communications associated with the website, streamlining data retrieval and analysis processes.
- Configured Docker Compose for seamless deployment and execution on headless systems.
- Incorporated multi-threading and asynchronous tasks, significantly boosting the scraping process's speed and efficiency.

DiscordCloud | *Sveltekit, NodeJS, Tailwind, Zod, SQLite, Python, Discord API*
- Leveraged REST API to fetch and send messages, integrating it seamlessly into the application.
- Utilized SvelteKit for dynamic front-end development, incorporating server-side rendering and Tailwind CSS for an enhanced user interface.
- Developed a robust NodeJS backend to manage account creation, handle complex queries to the SQLite database and split and send files to Discord.