

EDWARD CHAN

925-785-4533 | edwchan7529@gmail.com | [linkedin.com/in/edchan23](https://www.linkedin.com/in/edchan23) | github.com/echan23 | edward-chan.vercel.app

EDUCATION

University of Maryland, College Park

Bachelor of Science in Computer Science, Minor in General Business - GPA: 3.56

College Park, MD

Expected May 2027

EXPERIENCE

Software Development Intern

VetsEZ Inc

September 2025 - Present

Remote

- Refactored a legacy **MUMPS/ObjectScript** service to **Java**, enhancing maintainability and reducing technical debt.
- Developed and ran unit/integration tests covering **95%** of migrated functionality, ensuring parity with legacy logic.

Software Engineering Intern

Headway Technologies

June 2025 - August 2025

Milpitas, CA

- Engineered and scaled robust data pipelines leveraging **Elasticsearch**, **Logstash**, and **MS SQL** to extract, transform, and load (ETL) metadata for over **10,000,000** images used in semiconductor manufacturing.
- Developed an internal file search tool using **React** and **Elasticsearch**, enabling immediate defect analysis and saving R&D teams over **50** hours of manual lookup time per quarter.
- Created multithreaded **C#** and **Python (pandas/numpy)** applications to automate data pipeline processes.
- Built a **C#** log monitoring service to parse **Logstash** logs and send real-time alerts, cutting incident response time by **50%**.

Software Development Intern

Umee

October 2024 – January 2025

Remote

- Built a secure file-upload pipeline on **AWS Lambda** using pre-signed **S3** URLs, reducing backend processing overhead by **70%** and improving upload scalability.
- Architected new **GraphQL** APIs and re-engineered existing services on **AWS AppSync** with **DynamoDB**, implementing state management caching solutions (**BLoC**) that cut redundant requests by **30%** and optimized content delivery performance.
- Built end-to-end authentication system with **AWS Amplify** and **Cognito** for secure user access in a **Flutter** social media app.
- Set up CI/CD pipelines in **GitHub Actions** to automate testing and deployment, accelerating release cycles.

Data Analyst Intern

Internal Revenue Service

January 2024 – May 2024

Washington, D.C.

- Cleaned and normalized taxpayer data for over **60,000** individuals using **SQL Server**, ensuring consistency and accuracy.
- Developed **Power BI** dashboards leveraging **SQL Server** tax data, replacing manual Excel charting and improving data request turnaround by **40%** for **10+** users.

PROJECTS

InterviewLab.dev | **Golang, Python, React, Redis, PostgreSQL, WebSockets, OpenAI API, FastAPI, Docker**

- Developed a CoderPad-style mock interview platform with AI-driven code assistance and in-browser execution, containerized with **Docker** and deployed on **AWS ECS** serving **800+** all-time users.
- Built a collaborative code editor in **Go** using **Gorilla WebSocket** and **Redis Pub/Sub** for real-time multi-user editing.
- Implemented a scalable file storage system using **PostgreSQL** and **Redis**, with a **Go REST API** managing client connections and stateful operations across a distributed architecture.
- Engineered a **FastAPI GPT-4o** microservice on **AWS Lambda** to generate real-time coding hints via **OpenAI API**.

RAG-Powered Study Assistant | **Python, FastAPI, LangChain, Ollama, FAISS, Hugging Face Transformers**

- Built a CLI tool that answers natural language questions using a Retrieval-Augmented Generation (**RAG**) pipeline over embedded PDF lecture notes.
- Parsed and chunked dozens of class PDFs with **PyMuPDF**; generated semantic embeddings using **Hugging Face transformers** and indexed them in **FAISS** for fast vector search.
- Used **LangChain** to route top-k context to a locally hosted LLM via **Ollama**; served responses through a **FastAPI** backend.

TerpBites.net | **Python, Typescript, React, MySQL, Flask, HTML/CSS, AWS Lambda**

- Developed a full-stack web app using **React** and **Flask** to deliver real-time nutritional data from the University of Maryland Dining Services, serving **100+** active users.
- Scraped and normalized dining data with **BeautifulSoup** using cron jobs for automated updates; stored data in **RDS MySQL** and built a dynamic search feature powered by a **Flask API** on **AWS Lambda** for fast, queryable access.

TECHNICAL SKILLS

Languages: **Python, Golang, TypeScript, Java, JavaScript, C#, C, SQL, HTML/CSS, OCaml, Rust, Swift**

Frameworks/Libraries: **React, Redux, FastAPI, Express, Flask, Node.js, Next.js, Pandas, NumPy, Tailwind CSS, Selenium, BeautifulSoup, SwiftUI, Flutter SDK**

Tools & Technologies: **Git, GitHub, VSCode, Eclipse, IntelliJ, Figma, Notion, WebSockets, Elasticsearch**

Databases & Cloud: **MySQL, PostgreSQL, MongoDB, Redis, AWS (S3, RDS, EC2, Lambda, DynamoDB, ECS)**