

EDWARD CHAN

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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 a multithreaded C# application and Python scripts to automate file traversal, metadata extraction, and ingestion.
- 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

- Developed a secure file-upload pipeline with AWS Lambda-generated pre-signed S3 URLs, reducing backend processing overhead by 70% and improving upload scalability.
- Architected GraphQL APIs and re-engineered existing services on AWS AppSync with DynamoDB, implementing BLoC-based caching solutions 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)