EDWARD CHAN

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EDUCATION

University of Maryland, College Park   College Park, MD
Bachelor of Science in Computer Science, Minor in General Business - GPA: 3.56   *Expected May 2027*

EXPERIENCE

Software Development Intern   September 2025 - Present
VetsEZ Inc   *Remote*
- Migrated a **MUMPS/ObjectScript** service to **Java Spring Boot** using **OData** and **Apache Olingo**, implementing **REST**ful design patterns to improve modularity and reusability.
- Integrated automated testing and deployment workflows into **Jenkins** and **GitHub Actions** CI/CD pipelines.

Software Engineering Intern   June 2025 - August 2025
Headway Technologies   *Milpitas, CA*
- Built **ETL** pipelines using **Elasticsearch**, **Logstash**, and **MS SQL** to process **30M+** image metadata records, enabling real-time defect analysis across semiconductor manufacturing lines.
- Developed an internal **React** + **Elasticsearch** search tool that enabled engineers to query defect images instantly, eliminating **50+ hours** of manual lookup per quarter.
- Wrote multithreaded **C#** scripts and **Python** (**pandas**/**numpy**) workflows to automate data ingestion and transformation.
- Implemented a **C#** log monitoring service for real-time alerts, cutting incident response time by **50%**.

Software Development Intern   October 2024 – January 2025
Umee Social   *Remote*
- Implemented a secure file-upload pipeline on **AWS Lambda** using pre-signed **S3** URLs, reducing backend overhead by **70%**.
- Architected new **GraphQL APIs** and re-engineered legacy services on **AWS AppSync** + **DynamoDB**, leveraging **BLoC** caching to cut redundant requests by **30%** and boost content delivery speed.
- Built end-to-end authentication system with **AWS Amplify** and **Cognito** for secure user access in a **Flutter** social media app.

Data Analyst Intern   January 2024 – May 2024
Internal Revenue Service   *Washington, D.C.*
- Cleaned and standardized **60K+** taxpayer records in **SQL Server** to ensure accuracy and data integrity; built **Power BI** dashboards to replace manual Excel workflows, improving data turnaround by **40%** for **10+** stakeholders.

PROJECTS

InterviewLab.dev ☑ | *Go, Python, React, TypeScript, 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 distributed real-time code editor using **Go**, **TypeScript**, **Gorilla WebSocket**, and **Redis Pub/Sub**, enabling multi-user collaboration with **sub-200 ms** synchronization latency across sessions.
- 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**.

CitySage.net ☑ | *Python, YOLOv8, Flask, React, Roboflow API, OpenAI API, AWS (EC2, RDS)*
- Developed a real-time urban intelligence dashboard that aggregates live traffic feeds, weather alerts, and metro data for Washington, D.C., serving **50+ users**.
- Deployed distributed inference workers on **AWS EC2** with a **Flask** backend to process **10+** traffic camera streams at **10 FPS**, powered by a custom-trained **YOLOv8** model with over **90%** detection accuracy.
- Integrated **OpenAI API** to generate natural-language event summaries from detection logs stored in **Amazon RDS**.

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 **Amazon RDS** MySQL and built a dynamic search feature powered by a Flask API on AWS Lambda for fast, queryable access.

TECHNICAL SKILLS

Languages: Python, Go, TypeScript, Java, JavaScript, C#, C, SQL, OCaml, Rust, Swift, HTML/CSS
Frameworks & Libraries: React, Next.js, Redux, Flask, FastAPI, Express, Node.js, Flutter SDK, SwiftUI, Pandas, NumPy, Tailwind CSS, Selenium, BeautifulSoup
Databases & Cloud: MySQL, PostgreSQL, MongoDB, Redis, DynamoDB, AWS (EC2, S3, RDS, Lambda, ECS)
Tools & Technologies: Git, GitHub, VS Code, IntelliJ, Eclipse, Jenkins, Figma, Notion, WebSockets, Elasticsearch