Alexander Fu

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Technical Skills:

- **Programming Languages:** TypeScript, JavaScript, C++, C#, Python, Java, HTML/CSS, VB, Go, SQL, R
- **Tools:** AWS Tools, AngularJS, React, Express.js, Docker, Kubernetes, Springboot, Pandas, Cypress, Nginx, AZDO

Experience:

Magnet Forensics — Sep 2024 – Dec 2024
Software developer
- Collaborated with senior developers in an agile team, utilizing Jira Kanban boards to manage workflow, prioritize tasks, and track project progress.
- Built an internal artifact generator to automate the production of clear technical artifacts, including API documentation and metadata files to support end-users and improve CI workflow.
- Implemented an AWS Bedrock-powered LLM, trained on company documentation and repositories, to assist developers, resulting in a 50% decrease in resolution time for technical queries and a 15% estimated overall reduction in company-wide turnaround time.

Miovision — Jan 2024 – Apr 2024
Full stack Software Developer
- Implemented better bound detection for Miovision's AI powered computer vision model to increase accuracy of image-based measurements by 150% (65% -> 99.9%).
- Utilized AWS S3 and Lambda to architect and maintain a scalable, serverless image processing pipeline and optimized traffic data storage.
- Optimized APIS for reduced load and faster response, shortening load time by up to 85% (~2.3s->0.4s)

Blue Streak Electronics — Apr 2023 – Aug 2023
Full stack Software Developer and Database Developer
- Responsible for development and maintenance of REST APIS and data pipelines for auto parts information in Spring boot and TypeScript.
- Designed and developed a user interface using AngularJS to compile and display auto part data, implementing robust encryption to prevent potential SQL injection/data breaches.
- Refactored existing tables and created tools to implement business logic rules for over 600k auto parts.

P&P Data Systems — Apr 2022 – Aug 2022
Software Developer Intern
- Developed .NET applications for P&P's clinical database software, Clinic Information System (CIS)
- Designed and developed SQL database applications, optimizing SQL queries for performance and scalability, resulting in efficient data storage and retrieval for databases storing 2000+ patient records.
- Developed custom extract, transform and load (ETL) applications to create an efficient pipeline for patient data to varying formats.

Projects:

Wingman AI — https://github.com/a22fu/WingmanAI
Machine Learning and Data Analysis
- Developed a full stack AI assistant in React powered by AWS Bedrock to create Valorant professional rosters and answer Valorant related queries.
- Employed AWS Glue, Athena and S3 to automate data ingestion and transformation, creating a seamless ETL pipeline for processing and cataloging data used by the AI model.
- Overcame challenges with model accuracy by integrating a layered approach to data analysis, using AI helpers to filter and refine pools of player data before training.

SpyWatch — https://github.com/a22fu/SpyWatch
Hack the North 2024 Sponsor Prize Winner
- Leveraged Symphonic labs AI Lip reading API to develop a solution to inaudible audio feeds from drones, winning the Symphonic Labs Sponsor Prize
- Integrated third-party APIs, TCP Sockets, and real-time video streaming for AI-driven analysis.

Education:

University of Waterloo — September 2021 - Present
Bachelor of Computer Science
- Recipient of University of Waterloo President's Scholarship $2000