Pedro Zamora II

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Experience

Software Development Engineer II

Amazon Web Services — AWS MaxDome *Jan. 2024 — Present*

- Led multi-team initiative to refactor MaxDome's interface with AWS Redshift end-to-end, adding additional authorization controls to address customer feedback and improve stability, nominated for 2 innovation awards.
- Configured multiple CI/CD pipelines using AWS CodePipeline and AWS CodeBuild, streamlining development process and enabling rapid iteration for 5 new expansions post-launch.
- Acted as an on-call engineer, responding to incidents and performing root cause analysis to mitigate service disruptions. Created internal on-call runbook to centralize tribal knowledge and accelerate onboarding process.

Software Development Engineer I

Amazon Web Services — AWS MaxDome *Aug. 2022 — Jan. 2024*

- Launched AWS MaxDome, a scalable data governance service intended for managing large data applications.
- Utilized AWS Lambda, SQS Queue, and CDK to implement multiple CRUD APIs, adding asynchronous validations to improve downstream customer experience, reducing tickets by 32% compared to private beta.
- Developed various core frontend pages used to access and manage data for over 1170 external customer accounts using React and Typescript. Collaborated with UX/UI and PMs to design and iterate pages.

Software Development Engineer Intern

Amazon Web Services — Database Analytics & AI *May 2021 — Oct. 2021*

- Created internal Self Service Dashboard tool using React, Redux, and TypeScript allowing Project Managers to automatically publish critical alerts and banners within AWS Console, saving 120 monthly developer-hours.
- Architected multiple APIs using various AWS technologies including Lambda, API Gateway, and internal authentication services to retrieve data and perform other CRUD operations.

Software Engineer Intern

USHR Inc. *May 2020 — Oct. 2020*

- Utilized Python to maintain road-mapping software responsible for providing data on over 500,000 miles of road throughout North America used by autonomous vehicle systems of Nissan, Cadillac, and Rivian.
- Refactored publishing software in anticipation for General Motors' 2021 contract requirements, including implementation of newly requested road objects, and a 19% improvement of AWS EC2 usage.

Projects

Multi-Threaded Internet Search Engine

- Designed, built, and launched a fully-functional distributed search engine that crawled over 191 million pages, indexed them using modern ISR techniques, and handles multiple concurrent advanced search queries.
- Includes a written-from-scratch standard library that contains multi-threading, socket communication, hash table, logging, vector, and other various data structures resulting in over 6,500 lines of C/C++ code.

Weather Balloon Payload

- Designed, built, tested, and deployed atmospheric instrumentation to analyze wind shear forces experienced by commercial airliners using a high-altitude weather balloon.
- Led two person sub-team responsible for creating a custom Arduino framework in C++ for on-board sensors.
- Parsed and represented collected sensor data using C++, MATLAB, and Google Maps API resulting in "Best Overall Design" class award, voted by other students.

Education

University of Michigan — Ann Arbor

College of Engineering | May 2022 | BSE in Computer Science | Minor in Business

Skills

Languages: C++ // C // Java // JavaScript // Python // SQL // TypeScript
Frameworks: Angular // Bootstrap // Electron // MongoDB // PostgreSQL // React // Redux // Tailwind
Tools: AWS // AWS Lambda // CUDA // Git // Linux // MacOS // MATLAB // PostGIS // Windows