Shadi Jiha

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Experience

Amazon Web Services (AWS) – Vancouver, CA.   05/2024 - Present
Software Development Engineer

Amazon MemoryDB is a fully managed, Redis-compatible, in-memory database that provides durability, low latency, and high throughput for real-time applications.

- Designed, developed and maintained features for large-scale distributed systems that require very strict performance and security requirements for a service with more than 3000 GB/s of throughput
- Designed and developed features for **MemoryDB Multi-region feature**; a fully managed multi-Region active-active database feature **designed for 99.999% availability and microsecond read latency**
- Redesigned and **owned components** of Redis durable slot migration logic, preventing crashes during migrations and eliminating **100+ annual production** incidents, boosting availability and reduced on-call load for engineers.
- Authored design docs and built POC to improve primary node election after a major outage, preventing future write failures and driving improvements across core system components and monitoring APIs
- Developed and maintained **unit, integration, and system tests**, ensuring correctness and reliability across a complex, performance-critical codebase.
- Took **on-call ownership for production clusters,** responding to high-severity outages, triaging replication bugs, and driving long-term fixes as well as handling customer escalations
- Delivered and shipped code to production for **complex** tasks with **unfamiliar technologies** and code bases with **minimal guidance**
- Provided **technical guidance** for new hires and team members and presented various technical topics for various audiences

Amazon Web Services (AWS) – Toronto, CA.   05/2023 - 09/2023
Software Development Engineer Intern
System development on ElastiCache and MemoryDB team **(Rust, C, C++, python)**.

- Developed a **Rust Redis** module that loads, parses and collects statistics on RDB files **(Rust, C, C++)**.
- Wrote low level **rust** that calls C functions with **Foreign Function Interface (FFI)** and **bindgen**
- Debugged and fixed low level **memory** bugs
- Implemented memory allocation predication that has an accuracy of **98%** (Dove deep into **open source** Redis code)

Rio Tinto – Montreal, CA.   09/2022 - 12/2022
Software Engineer Intern
Backend development on their databases and server platform **(C#, SQL, VBA)**.

- Developed C# applications that connect and manage a SQL database **(SQL, C#)**.
- Improved SQL query execution time by approximately **25%**. Reduced query memory usage by approximately **13%**.
- Created excel reports that query valuable data from the SQL database using VBA.

Tap medical, Inc. – Montreal, CA.
Full-stack Software Engineer Intern   09/2020 - 04/2021
Full-stack development in a moderate microservice codebase with AWS DevOps.

- Improved software security by implementing **back-end** features such as database recovery system and implemented/debugged over 20 **front-end** features **(Laravel, REST APIs, ReactJS, TypeScript, Redux, Flux)**.
- Built full admin dashboard with live Chat between admins and customers.
- Automated the workflow of the QA process using **selenium** with python and increased testing speed by 50%.

Education

Bachelor of Engineering (Software Engineering), Concordia University
Montreal, QC.

Courses: Data Structures & Algorithms, Java OOP, Web Applications, C++ Program Design, Advanced game development.

Skills and Awards

Coding, Programming languages: C, C++, Java, Rust, Python, JavaScript/TypeScript, C#, SQL, PHP
Systems & Concepts: Distributed Systems, Scalability, High Availability, Low Latency, API Design, Monitoring, Testing (Unit/Integration/System), User experience, Design docs.
Cloud & Tools: AWS, Redis, MemoryDB, ElastiCache, Git, Linux, GDB

1st place winner ConUHacks hackathon   Jan 2022