

Sajan Toor

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Education

Simon Fraser University

BSc: Computer Science - Minor in Mathematics

Vancouver, BC

Sept 2020 - Dec 2024 (Expected)

Work Experience

SAP - Agile Developer Intern

Jan 2022 - Sept 2022

Vancouver, BC

- Developed highly scalable and fault-tolerant microservices using Java, Spring Boot, JAX-RS, Apache and Hystrix
- Designed and developed a proof of concept for a new microservice to synthetically monitor the health of critical workflows for SAP Analytics Cloud, improving stability and reducing customer impact
- Created alerting systems to notify on-call developers of issues before customers report them, ensuring low customer impact, using a variety of metrics such as response time and error rate
- Improved the API response time of microservices by up to **60%** by optimizing code, reducing the number of database calls and caching data
- Developed end-to-end UI based testing software to test key workflows in canary and production environments using Selenium, Python and Jenkins which allowed developers to identify and fix issues
- Tested software functionality, performance and scalability to ensure reliability using JUnit, Mockito and JMeter

Project Experience

NP-Compete

TypeScript, Node.js, Express, Redis, TypeORM, PostgreSQL, Next.js, Chakra UI

- Developing a web application where users join rooms to compete in programming challenges against each other
- Created a REST API using Express to allow users to login, create rooms, and submit code to a LeetCode API
- Implemented rooms using WebSockets to communicate code updates, chat messages and other events between the clients and server in real-time
- Stored data in a PostgreSQL database, using TypeORM to store user data, and Redis to cache data and user sessions to reduce database read/write operations
- Developed front-end in Next.js using React Hooks APIs to manage application state and server-side rendering to improve performance

Unofficial LeetCode API

Java, Spring Boot, Swagger, Apache HTTP Client, Google Cloud Platform App Engine

- Developed an API orchestrator, providing REST APIs for common LeetCode operations such as retrieving problems and submitting solutions using Java and Spring Boot
- Utilized Apache HTTP Client to make HTTP requests to LeetCode's REST and GraphQL APIs
- Deployed to Google Cloud Platform's App Engine, utilizing health endpoints to ensure API availability
- Documented the API endpoints using Swagger, providing a UI for users to interact with the API

UDP/IP Implementation

Rust, TUN/TAP, Wireshark

- Engineered a robust low-level UDP/IP implementation with full support for IPv4 and UDP protocols
- Orchestrated vital protocol functionalities such as checksum calculation and verification, packet fragmentation and reassembly, handling Time To Live (TTL), etc.
- Utilized a TUN interface facilitating direct interaction with raw network layer packets from the kernel
- Tested using Wireshark ensuring accurate transmission and reception of packets

Skills

Languages: Java, JavaScript, TypeScript, Python, C, C++, Rust, SQL, x86 Assembly, HTML, CSS, Haskell

Technologies: Node.js, Express, Spring Boot, GraphQL, Hystrix, Redis, React, Next.js, Vue, Selenium, RabbitMQ

Tools: Git, GitHub, Jira, Jenkins, Postman, JMeter, Docker, Kubernetes, CloudFoundry, Google Cloud Platform