Md Sultanul Arefin Khan

Conyers, GA | sultan.arefin99@gmail.com | 470-974-0705 | linkedin.com/in/sultanulkhan | sultanulkhan.com

PROFESSIONAL SUMMARY

Software Engineer with 3+ years of experience in scalable backend development, real-time data processing, and cloud-native microservices using Java, Python, and AWS in enterprise environments. Delivered production-grade features for connected vehicle platforms used by 10M+ users, including remote access, diagnostics, and telemetry integration. Skilled in RESTful API design, OAuth2/JWT authentication, CI/CD pipelines, and data-driven development. Adept at building scalable, resilient systems with measurable real-world impact.

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++, C#, JavaScript, SQL, HTML, CSS, TypeScript, Ruby, Go
Technologies/Tools: Git, J2EE, NoSQL, MySQL, MongoDB, .NET Core, REST, React.js, Express.js, Docker, Ruby on Rails, Kubernetes, Spring Boot, Spring MVC, JSON, Tomcat, GraphQL, Hibernate ORM, Soap, Linux, gRPC, AI
Cloud Technologies: AWS (DynamoDB, API Gateway, SQS, EC2, S3, Lambda), Azure (AKS, DevOps), GCP (BigQuery)

WORK EXPERIENCE

General Motors (Consulting role through Emonics LLC) | Software Engineer | Remote **Aug 2022 – Present**

- Developed and launched vehicle-connected features adopted by 10M+ OnStar users (Lyriq, Hummer, Cruise), contributing to a successful EV/AV product launch and supporting $300M in initial sales.
- Built backend support for predictive maintenance, remote lock/unlock, location tracking, and emergency alerts, with features adopted by 60M+ drivers, enhancing reliability and driver safety across the OnStar-connected platform.
- Engineered and containerized scalable microservices using Spring Boot, Kafka, Docker, and Kubernetes, replacing monolithic legacy systems, enabling 5x faster deployments and more resilient service performance.
- Optimized secure RESTful APIs with OAuth2 to enable instant vehicle tracking and diagnostics, reducing latency from 300ms to 150ms across major API endpoints and enabling seamless data flow between AWS and OnStar systems.
- Refactored vehicle telemetry pipelines using Apache Spark, reducing memory usage by 25% and saving $10K/month through optimizations including partitioning, caching, and Spark UI tuning, boosting throughput for real-time analytics.
- Achieved a 30% increase in maintenance scheduling efficiency by integrating vehicle microservices with Salesforce OneCRM using Kafka and REST APIs, enhancing real-time data synchronization and system interoperability.
- Collaborated with QA and hardware teams using Jira and Agile methodologies to ensure robust system integration and minimize launch issues across vehicle platforms, facilitating rollout quality and lowering regression rates.

PROJECTS

Online Park Ticketing System | Java, Spring Boot, Angular **Feb 2022 – Apr 2022**

- Engineered a full-stack online ticketing system for park reservations using Angular and Spring Boot, integrating JWT login, Google Calendar API for slot booking, and real-time text reviews using JPA Hibernate and MySQL.
- Implemented a secure full-stack system using Spring Security with Role-Based Access Control (RBAC), containerized with Docker, and deployed to AWS/Heroku to ensure scalability and reliable user authentication.
- Built a relational database with MySQL/PostgreSQL and JPA/Hibernate, optimizing queries to cut load times by 40%, and integrated Spring Mail to automate booking confirmations and reminders.

Movie Rating App | Python, Flask, React.js **Oct 2021 – Dec 2021**

- Developed a movie recommendation system using React.js and Flask, integrating the Surprise library for item-item collaborative and content-based filtering to deliver personalized suggestions based on user preferences.
- Designed a secure, responsive web app with JWT authentication, asynchronous RESTful APIs, and a PostgreSQL backend, reducing security incidents by 35% as measured through audit logs and incident reports.
- Utilized lazy loading and React hooks (e.g., useMemo) to reduce load times by 30% and enhance user experience.

Expense Tracker Website | AWS, Node.js, React.js **Mar 2021 – May 2021**

- Designed a full-stack expense-tracking web app using React.js and Node.js, integrating an OAuth2-secured bank API for live transactions and financial monitoring, featuring AI-driven budget recommendations via rule-based logic.
- Implemented scalable RESTful APIs with Prisma ORM, configured AWS CloudWatch monitoring with SNS alerts, and built a custom dashboard to ensure production reliability and reduce issue detection time by 20%.
- Strengthened secure API integration and system observability to meet the demands of modern financial platforms, enabling fraud monitoring and improving real-time transaction reliability by 30%.

EDUCATION

Georgia State University | Atlanta, GA **Aug 2018 – May 2022**

Bachelor of Science in Computer Science, GPA: 3.82/4.00
Magna Cum Laude, Dean's List (multiple Semesters)
Relevant Coursework: Software Engineering, Data Structures, Object-Oriented Programming, Operating Systems, Database Systems, Computer Architecture, Design & Analysis of Algorithms, Machine Learning