

Md Sultanul Arefin Khan

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PROFESSIONAL SUMMARY

Results-oriented Software Engineer with 3+ years of hands-on experience developing scalable backend systems, real-time data pipelines, and cloud-integrated microservices in enterprise environments. Proven track record of delivering production-grade vehicle-connected features with a strong foundation in RESTful API design, secure authentication (OAuth2/JWT), and data analytics. Passionate about building reliable, high-performance systems that bridge software, data, and real-world applications.

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, JavaScript, SQL, HTML, CSS, TypeScript, Ruby, Go

Technologies/Tools: Git, Gitlab, NoSQL, MySQL, Redis, React.js, Kafka, Rabbit MQ, VMWare, Jira, Docker, Kubernetes, Spring, Spring Boot, Spring MVC, Kibana, Hibernate ORM, Soap, JUnit, Prometheus, Grafana, Dynatrace, Datadog, Microservices, AngularJS, Jenkins, Maven, Gradle

Cloud Technologies: AWS (DynamoDB, API Gateway, SQS, EC2, S3, Lambda), Azure (AKS, DevOps), GCP (BigQuery)

WORK EXPERIENCE

General Motors (Consulting role through Emonics LLC)

Aug 2022 – Present

Software Engineer

Remote

- Built and deployed microservices within the OnStar Telematics Ecosystem using Spring Boot, Kafka, Docker, and Kubernetes, modernizing legacy systems, and increasing real-time data processing by 20%.
- Delivered key vehicle-connected features, including predictive maintenance, remote lock/unlock, location tracking, and emergency alerts, leading to enhanced driver safety and system stability.
- Optimized secure RESTful APIs with OAuth2, enabling instant vehicle tracking and diagnostics, ensuring seamless data flow between AWS and OnStar systems to reduce latency, improving communication reliability.
- Boosted maintenance scheduling efficiency by 30% through integrating vehicle microservices with Salesforce OneCRM using Kafka and REST APIs, strengthening continuous data synchronization and system interoperability.
- Reduced processing time by 15% for large-scale vehicle telemetry analytics by leading Apache Spark performance tuning using Spark UI, implementing partitioning, caching, and resource management techniques.
- Collaborated across software, QA, and hardware teams to support the launch of new EV and AV programs (Lyriq, Hummer EV, Cruise) through Agile software integration, Jira-based coordination, and OnStar logistics.

PROJECTS

Online Park Ticketing System | Java, Spring Boot

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 secure user authentication and account management using Spring Security with role-based access control.
- Built a relational database with MySQL/PostgreSQL and JPA/Hibernate, optimizing queries to reduce load times by 40% and significantly improve data retrieval speed.
- Deployed the app to AWS/Heroku using Docker for containerization, ensuring scalability and reliability in production.
- Integrated Spring Mail to automate booking confirmations and reminders, streamlining user communication.

Movie Rating App | Flask, React.js

Oct 2021 – Dec 2021

- Developed a movie recommendation system using Flask and React.js, leveraging the Surprise library for item-item collaborative and content-based filtering to deliver personalized suggestions based on user preferences.
- Built a secure, responsive web app with JWT-based authentication, asynchronous RESTful APIs, and a PostgreSQL database for managing users, movies, and reviews, optimizing performance with lazy loading and React hooks like useMemo for efficient state management, reducing load times.

Expense Tracker Website | AWS, React.js, Node.js

Mar 2021 – May 2021

- Designed a full-stack expense-tracking web app using React.js, Node.js, and PostgreSQL with OAuth2-secured bank API integration for live transactions, financial monitoring, with AI-driven budget recommendations via rule-based logic.
- Implemented RESTful APIs with Prisma ORM, configuring AWS CloudWatch monitoring with SNS alerts, and custom dashboards for production reliability.

EDUCATION

Georgia State University

Aug 2018 – May 2022

Bachelor of Computer Science, GPA: 3.82/4.00

Atlanta, GA

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