ATRAYEE NAG

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SUMMARY

A backend engineer, self-starter, and thrive in a fast pace and challenging environment with cross-functional teams. Experienced in building scalable and secure backend services and infrastructure in diverse domains - automotive, finance, and services.

EXPERIENCE

Senior Software Engineer   **Rivian Automotive**   **11/22/2021 - Present**
Team: Connectivity Management Platform
- Led the design and development of Connectivity IoT Platform, a serverless microservice-based middleware that supports device connectivity management, seamless new device onboarding, aiming at increasing scalability and reusability.
- Integrated with external vendor services to consume capabilities with device lifecycle events, controlled by a rule engine, which optimized connectivity cost by 35% and improved network coverage.
- Demonstrated expertise in analyzing product requirements and creating architecture blueprints to handle asynchronous services by utilizing message queues, callbacks, notifications, and polling approaches.
- Implemented security best practices - access controls and encryption decryption on PII data with AWS KMS.

Software Engineer   **Goldman Sachs**   **03/30/2020 - 11/18/2021**
Team: Corporate Treasury
- Performed full-stack development of a time series model which automated the quantification of variances in the net liquidity of the firm saving ~2 hours on the previous manual excel-based reporting. (*Java, React, Tableau*)
- Engineered a database model using the concept of partitioning to create month-sharded tables on data rundates and using union operators to limit tables queried by view query, to store frequently updated business hierarchy data. (*Sybase IQ*)

Software Engineer   **Tata Consultancy Services**   **03/17/2014 - 07/16/2018**
Team: JD Williams - N Brown Group, Acuity - Mcgraw-Hill Education
- Customized Hybris 6.5 (Java-based E-comm platform) OOTB functionaries, developed REST Web Services to integrate with Oracle SOA suite, test cases using Junit, and validated coverage in SonarQube reports. Worked in agile - CI/CD. (*Java*)
- Integrated CRM data into an analytics platform which helped to achieve relevant levels of personalization and an uplift of 18% in new visitor conversion within two weeks. (*Java, Javascript*)
- Undertook the development of an online assessment platform using ShadowCAT algorithm - a ranking-based approach.

LANGUAGES AND TECHNOLOGIES

- **Languages**: Java, Python, Typescript, Javascript, R, PHP
- **Frameworks**: Serverless, Spring MVC, Hibernate, Hybris Commerce, NodeJS, React, JUnit, Jest, Karma
- **Databases**: Dynamo DB, Oracle, MySQL, DB2, Sybase IQ, SQL Server
- **Cloud:** AWS Lambda, API Gateway, EC2, SQS, Apache Kafka(MSK), S3, ElastiCache
- **Others:** Hadoop, Docker, Informatica, Tableau, Git, Jira, Sonarqube, Datadog, Swagger

EDUCATION

The State University Of New York At Buffalo   **Aug 2018 - Feb 2020**
Master of Science; Major in Computer and Information Science
West Bengal University of Technology   **Aug 2009 - Jul 2013**
Bachelor of Technology; Major in Computer Science and Engineering

PROJECTS

- **Group Messenger:** A distributed peer-to-peer group messaging app that guarantees Total-FIFO ordering using the ISIS algorithm. The system is fault-tolerant and easily scalable. (*Java, Android, Socket*)
- **Big Data Analysis and Visualization:** Using multiple live data sources, engineered a data acquisition and analytics pipeline that explored data on top companies (*Python, Hadoop, MapReduce, spaCy, D3, Docker*)
- **Simple DHT:** A peer-to-peer distributed hash table based on the Chord protocol, providing ID space partitioning/re-partitioning, node joins, and ring-based routing for insert, delete, and query operations. (Java, Android, Socket)
- **Simple Dynamo:** Amazon Dynamo-styled key-value storage with partitioning, quorum-based replication, and failure handling, guaranteeing simultaneous availability, linearizability, and eventual consistency. (*Java, Android, Socket*)