Karteek Gole

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Education

University of Texas, Arlington — *May 2019*
Master of Science in Computer Science and Engineering

University of Pune — *May 2017*
Bachelor of Engineering in Information Technology

Technologies

Languages: Java, Python, SQL, JavaScript, TypeScript, HTML 5, CSS 3
Backend: Spring Boot, Spring MVC, Spring Batch, REST APIs, Microservices
Data and Streaming: Spark, Kafka, Flink, Snowflake, PostgreSQL
Cloud (AWS): S3, Athena, Glue, Lambda, EMR, EC2, DynamoDB, Redshift
Orchestration and CI/CD: Airflow, Jenkins, Kubernetes, CloudFormation
Frontend and Viz: Angular, Hugo SSG, D3.js, Tableau

Experience

Capital One Financial Services — *Plano, TX*
Software Engineer - AutoNavigator Tech — *Oct 2019 - Present*

- Engineered Spring Boot microservices using Spring MVC to serve vehicle insights REST APIs, computing metrics such as click-through volume, mileage trends, and pricing anomalies over dealer inventory via partitioned Amazon Athena queries on Amazon S3. Implemented batch and scheduled processing using Spring Batch based workflows and Spring Scheduler to support incremental and historical reprocessing of inventory data, while enabling near–real-time updates through event-driven ingestion pipelines using AWS Lambda, Amazon S3 events, and Apache Airflow–orchestrated Spark workflows.

- Built a high-throughput vehicle views-tracking service which produces normalized DynamoDB tables to keep record of click information on dealer inventory vehicles. Consumed the data from high speed, pre-partitioned Kafka topics using Sliding and Tumbling window based orchestration leveraging Apache Flink to produce wide column tables that are used in several marketing use-cases.

- Developed additional RESTful APIs in Java and Spring Boot to return Vehicle Stock Media Images based on payload attributes. Integrated with Amazon Athena to query an S3-lake hosted Parquet metadata index, with schema and partitions managed in an AWS Glue Data Catalog. Served S3 image URLs as direct keys or vendor CDN links, enabling downstream associates and applications to reliably embed canonical vehicle images into marketing cross-sell use cases.

- Deployed the services on Amazon EC2 Auto Scaling Groups behind Elastic Load Balancers to ensure secure and scalable platform aligned with Continuous-Delivery based principles. Improved reliability through test-driven development using in-house tooling for effective SDLC delivery cycles.

- Redesigned AutoNavigtor's performance monitoring process by developing Northstar, an Angular and D3.js based single-page reporting application serving as a centralized hub for the division's performance monitoring.

- Reduced reporting costs by 50% by eliminating the dependency on external tools such as Tableau or PowerBI. Deployed the application on S3 Static Pages with an OAuth SSO Layer, while also ensuring high availability using Amazon Load Balancer.

- Created the AutoNav Message Bot using Slack API to automate monitoring for 10+ dependency tables and real-time KPI tracking, improving operational efficiency and reducing manual oversight on marketing output.

- Global Integrated Data: Reduced marketing costs by 37% by modernizing production ETL pipelines for AutoNavigator Marketing. Migrated legacy AWS Data Pipeline implementations to serverless architectures using AWS Lambda, CloudWatch events, EMR clusters and Jenkins CI/CD based containerized orchestration enabling cost-effective scaling.

- Designed and Deployed Core (D1) and Access (D2) layer Snowflake data tables to support AN's Business, Data Science and Tech teams with data accessibility. Created Business Current/Point-in-time views off of several base tables to cut querying costs by over 40%. Ensured efficient partitioning of Non-Public Private Data and Public Data.

- Controls Monitoring: Aligned with Legal and Process Management teams to monitor controls for the Marketing division. Implemented compliance reporting dashboards using AWS QuickSight powered by RedShift to help facilitate monthly process and legal reviews. to ensure claims are substantiated and fall within the regulatory standards.

- Cyber, Resources and Change Management: Optimized AWS resource provisioning by designing and testing CloudFormation templates, cutting downtime by 30% during critical operations. Regularly issued ServiceNow Incidents and Change Orders to remediate vulnerabilities and resolve scan findings in AN's production data.

- Enterprise Data Exchange: Engineered secure data exchanges between AutoNavigator and 6 different third-party marketing affiliates by building and on-boarding 10+ data routes using an enterprise-grade EFG framework. Ensured compliant, cyber-secure transmission of sensitive data by adhering to strict enterprise security protocols.