

MOHAK CHUGH

Software Engineer at Amazon

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Work Experience

Amazon	Gurugram, Haryana, India · Hybrid
Software Development Engineer 2 – [Level 5]	10/2024 – Present
<ul style="list-style-type: none">Worked on Developing APIs to vend out Amazon Financial data for Transactional and Non-Transactional collections use-cases with 100% reconciliation coverage. Used: AWS EMR (spark), AWS Big Data, APIGateway, AWS Lambda, DynamoDB	
Software Development Engineer 1 – [Level 4]	12/2022 - 09/2024
<ul style="list-style-type: none">Developed Spark based Big Data reconciliation engine with multiple data source support reconciling 1 billion+ records daily. Provides capabilities to reconcile between SQL and No-SQL data sources with custom hooks for integration with data pipelines. This solution reconciles 100% of internal financial data flowing through a central data lake.Led the creation of an award-winning RAG-based LLM QnA bot, engaging 300+ users and processing 5K questions daily; leveraged advanced prompting techniques and guardrails, resulting in 93% accuracy from rich text documents Used: LLM ClaudeV2.1, AWS cloud, Streamlit, DynamoDB, PostgreSQL (RDS), ECS Fargate, Airflow	
Data Engineer 1 – [Level 4]	09/2021 - 12/2022
<ul style="list-style-type: none">Engineered AI-driven headcount management tools by leveraging 100+ work driver datasets, enabling precise ML models for scalable headcount predictions; boosted operational efficiency by forecasting resource allocation with 95% accuracy. Integrated functionalities like email notification systems, auth management and ML data pipeline orchestration using Airflow.Launched e-invoicing compliance for Amazon by enabling VAT IDs encryption for Brexit, AU, CA regions, impacting 3,000+ global vendors.Collaborated with senior data engineering teams on a re-architecture of our financial analytical mesh data-lake with database consolidation, automating schema-level data sharing across Redshift clusters. Designed and developed to ensuring SLAs of 1 sec is met. Authored with 90% test coverage. Deployed efficient, secure solution, enhancing org productivity with security reviews for critical data storage.Mentored 3 interns and got 2 converted to full time engineers. Used: Airflow, Redshift, AWS EMR (spark), AWS Serverless, CI-CD pipelines, AWS Big Data	

Education

Maharaja Surajmal Institute of Technology	08/2017 - 12/2021
· Bachelor of Technology - Computer Science 8.7 University Rank 3 in Final year	

Publications

Benchmarking geospatial database on Kubernetes cluster	— Analysis and Optimizations of PostgreSQL/PostGIS in Kubernetes for improved geospatial query performance.
Generative AI Q&A chat assistant using Amazon Bedrock	— Built a custom RAG based QnA system for a niche use case which gave accuracy of 86% as compared to 49% from of the shelf tools

Languages and Skills

Work Domains:	AWS Cloud (Development and Deployment for Serverless and Server based solutions), Applied Artificial Intelligence - LLM RAG Architecture and Natural Language Processing (NLP), Big Data (Analytical and Transactional) and Advanced System Design on AWS
Languages:	Python, Java, NodeJS, Angular, Advanced SQL
Tools and Technologies:	API Development, Distributed Systems (Spark) and Data pipeline management via Airflow , Data Structures and Algorithms

Projects

DroneDash
https://mohakchugh.github.io/website/#/dronedash
· An Online Web Interface for surveillance in large scale construction sites. Supports up to 8 livestreams at once. Currently being used by Aditya Birla Group.
ContentCollab
https://mohakchugh.github.io/website/#/blogger
· A real-time online document editor that allows a group of users to collaborate on webpage contents, see and make changes in real-time.

Achievements

1st Runner's up in Digital India Makeathon
· Certificate Link: https://drive.google.com/file/d/1YEMPcosx8C0kOxqFn3vXHiugsIIhkZMX/view
Soft Skills Certification from AICTE
· Certificate Link: https://drive.google.com/file/d/1aBjeD3gCGHphhdfNAyZrXADcOZyBjLQ/view
University Rank 3 in BTech Final year
· Certificate Link: https://www.linkedin.com/feed/update/urn:li:activity:7055093560970256384/