Neeraj Kumar Singh

AWS Certified Solutions Architect - Professional | AWS Certified Data Engineer

Professional Summary

Seasoned Data Engineer with over a decade of experience in technology, including 6+ years architecting and deploying robust data ecosystems on AWS. He specializes in leading cross-functional teams to tackle complex architectural challenges and consistently delivers highly available, scalable, and business-driven data solutions. Recognized for innovation and designing ground-up architectures that enhance data accuracy, unlock insights, and accelerate organizational growth.

Experience

Senior Data Engineer

msg global Solutions India Pvt Ltd | Aug 2023 – Present
Semantic Bridge

- **Engineered an innovative AI-driven workflow** to automate the creation of complex business process models for the German Military. Leveraged **AWS Bedrock** with the **Claude Sonnet 4** model to process inputs and generate **BPMN 2.0 compliant XMI files**, directly consumable by the client's **Sparx Enterprise Architect** tool.
- **Architected and deployed** the product's initial AWS cloud infrastructure from the ground up using **Terraform**. **Established a scalable, and modular Infrastructure as Code (IaC)** framework that ensured 100% reproducible environments and streamlined future enhancements.
- **Spearheaded a research and development (R&D) initiative** to enhance the platform with **intelligent search capabilities**. Prototyped a solution for deploying machine learning models on **Amazon OpenSearch** Service via **SageMaker and S3**, successfully demonstrating the feasibility of semantic search across the generated process models.

ProfileMap

- Designed and deployed a **serverless user profile reminder system** on AWS using Terraform, optimized for **$3/month** cost.
- Engineered **automated daily reporting pipelines** on AWS (Batch, Glue, S3, Athena), scaling reliably under **$10/month**.
- Developed a **cost-effective candidate search request system** via email on AWS with Terraform, enabling **skill-based queries** for under **$5/month**.
- Leveraged **AWS services** (EventBridge, Batch, ECR, Glue Crawler, DynamoDB, Cognito, S3) with **Python & SQL**; enforced **security & compliance** via IAM and Lake Formation; enabled reporting in **Power BI** through **Athena ODBC**.
- Applied **Gremlin-Python** to model and retrieve complex relationships in **Amazon Neptune**.
- Received **recognition from Head of Product** for innovation in reporting architecture and strategic use of AWS services.
- Praised by Data Scientists for delivering a **POC on DynamoDB attribute-level item size calculation**, enhancing data accuracy and performance.

Contact Details

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Technical Skills

Cloud Architecture, Cloud Infrastructure, Cloud Services, AWS, Cloud Engineer, Cloud Computing, IaC, Terraform, Data Ingestion, Data Transformation, Data Security, Data Management, Data Storage, CICD

AWS

Lambda, Batch, ECS, Fargate, API Gateway, Glue, SNS, SQS, Kinesis, MSK/Kafka, DynamoDB, S3, Neptune, Lake formation, Athena, Redshift, IAM, Cognito, SES, EventBridge, Secrets Manager, SSM Parameter Store, SES, ECR

Data Engineering

Cloud Computing, Real-time Streaming, Data Warehouse, OLAP, Data Lake, ETL/ELT, Batch, Databases, SQL, NoSQL, Gremlin-Python, Spark

Programming & Scripting

Python, Pandas, SQL(OLTP), C#

Infrastructure as Code

Terraform

DevOps

GitHub, Bitbucket, Jenkins, Atlantis

Senior Consultant

EXL Services (Inductis India Pvt Ltd), Gurgaon | May 2023 — Aug 2023

Mettis

- Designed and implemented an **ETL batch pipeline** to process batch datasets (CSV/JSON files). Performed **data cleaning** & **transformations**.
- Stored processed datasets in **Amazon S3 (Parquet, partitioned by year/month/day)** for efficient querying.
- Automated batch jobs using **AWS EventBridge Scheduler**, scheduled to run daily. Queried processed data via **AWS Athena** and created summary dashboards for reporting.

Data Engineer (Team Lead)

Stats Perform, Bengaluru | Mar 2020 — May 2023

GSDP

- Developed **scalable**, **event-driven data pipelines** for various **sports** data **ingestion**, **transformation**, and **validation** using **Python** & **SQL (ETL/ELT)**, with storage in **S3 (Data Lake)**, **DynamoDB**, and **Redshift (Data Warehouse-DWH)**.
- Designed **real-time** (**streaming**) data pipelines using **Kinesis Data Streams** & **MSK Kafka**, alongside **batch processing** of sports data, integrating with AWS services like **Lambda**, **SNS**, **SQS**, **S3**, and **API Gateway**.
- **Promoted to Software Engineer III (2021–2022 Appraisal Cycle)** for outstanding data engineering contributions and successfully leading a small team to deliver high-impact results.
- **Received Global Recognition Award (Q1 2022)** for exceptional contributions in data engineering, driving measurable business value.

Senior Software Engineer (Consultant w/ Goldman Sachs)

Saggezza - an Apexon Company, Bengaluru | Apr 2019 — Mar 2020

- Built **serverless** & **event-driven** data pipelines for the technical support business unit using Lambda, performing **ETL** and **quality checks**, with **scalable storage** in AWS S3 & DynamoDB.
- **Developed data transformation logic** in **C#, SQL & Python**, ensuring data accuracy and consistency.

Software Developer

Tradelab Technologies, Bengaluru | Dec 2014 — Mar 2019

Stock Trading Dealer Application for OMS

- **Independently managed product development**, from **gathering client requirements to feature implementation & bug fixes**.
- **Integrated WebSocket APIs & REST APIs** for seamless real-time data exchange.
- **Implemented JSON serialization/deserialization** using **Newtonsoft** for optimized data processing.

India's #1 Desktop Application - Zerodha PI

- **Developed new features,** performed **bug fixes, wrote unit testing** and **developed various technical charting features,** ensuring accuracy, performance, and reliability.

Education

B Tech, Shri Mata Vaishno Devi University

Monitoring & Logging

AWS CloudWatch, Insights, CloudTrail

Visualization & BI

Power BI, Athena

Project Management & Documentation

JIRA, Confluence

Design & Cost

app.diagrams.net, AWS Pricing Calculator, Cost Explorer, Budgets, Service Quotas