Nitender Kumar

Principal Data Engineer | Cloud Data Platforms | Big Data & GenAI Solutions
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Professional Summary

Principal Data Engineer with 13+ years of experience architecting **cloud-native, GenAI-powered data platforms** that process **10M+ daily events** across automotive, marketing, and sustainability domains. Proven ability to reduce **pipeline costs by 30%**, deliver **sub-second streaming analytics**, and lead cross-functional teams of up to **12 engineers**. Adept at designing **scalable, AI-driven platforms** on AWS with measurable business impact.

Core Competencies

- **Big Data & Cloud:** AWS (S3, Kinesis, Lambda, Glue, EMR, Redshift, Athena, Step Functions)
- **Data Engineering:** ETL, Streaming, Lakehouse Architecture, Serverless Pipelines
- **Programming & Frameworks:** Python (OOPs, Pandas, PySpark), FastAPI, Flask, LangChain, HuggingFace
- **Databases:** SQL (Postgres), NoSQL (MongoDB)
- **AI/ML & GenAI:** AWS SageMaker, TensorFlow, PyTorch, LLMs (ChatGPT, Claude, Gemini), RAG, Prompt Engineering
- **DevOps & Orchestration:** Docker, Kubernetes, Jenkins, GitHub Actions
- **Leadership:** Mentoring, Agile Practices, Cross-functional Collaboration

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Leadership Highlights

- Scaled engineering team from **3 → 12 members** across multiple domains and geographies.
- Mentored and coached **8 engineers**, with **3 promotions to senior roles** under direct guidance.
- Drove **AWS cost optimization**, reducing annual spend by **$36k (25–30%)**.
- Instituted engineering best practices (CI/CD, coding standards, DevOps automation), reducing deployment failures by **50%**.
- **Collaborated with product managers and data scientists** to shape platform roadmap, ensuring **seamless integration of AI/ML and GenAI models** into business workflows.

Professional Experience

Principal Data Engineer – Darby Telematics India Pvt Ltd & Danlaw Inc

Mar 2019 – Present | Bangalore, India

Deep View Analytics – Cloud-Native GenAI Data Platform (Automotive Domain)
- **Architected a multi-domain AWS-based data platform** processing **5TB+/day across 500K+ connected vehicles**, enabling predictive insights into **vehicle health, driver behavior, and emissions optimization**.

- Designed **end-to-end real-time ingestion and analytics pipelines** using **AWS Kinesis, Lambda, Glue, Redshift, and Athena**, achieving **sub-second streaming latency** for telematics and diagnostic data.
- Integrated **AWS SageMaker pipelines** for **predictive maintenance, driver risk scoring, and emission forecasting**, with automated feature engineering and model retraining workflows.
- Built **serverless workflows** with **AWS Step Functions** to orchestrate **data enrichment, validation, and ML model inference** across ETL, analytics, and AI components.
- Leveraged **Generative AI frameworks (LangChain, Hugging Face, OpenAI APIs)** to create **interactive AI copilots** that deliver **context-aware insights, report summarization, and carbon optimization recommendations** for fleet managers.
- Engineered a **Redshift-based data warehouse** integrated with **Athena and QuickSight**, enabling self-service analytics and natural language query capabilities using **GenAI-powered interfaces**.
- Led a **team of 8 engineers**, implementing **CI/CD (GitHub Actions, Docker, EKS)** and **data quality automation**, reducing release time by **40%** and ensuring enterprise-grade reliability.
- Achieved **30% cost reduction** via **data lifecycle optimization** (tiered S3 storage, Glue catalog tuning, and query optimization in Athena/Redshift Spectrum).

Senior Software Engineer – NEC India Pvt Ltd

Aug 2012 – Feb 2019 | Bangalore, India

- Built **data pipelines on Hadoop clusters** handling multi-source SQL ingestion and processing, ensuring high-quality data with **automated validation**.
- Developed **Queue Length Management (QLM) AI application**, leveraging TensorFlow and OpenCV to reduce customer wait times in retail by **30%**.
- Created **Predictive Auto Ordering System**, optimizing inventory levels and reducing stockouts by **20%**, boosting sales efficiency.
- Contributed to **IoT Big Data Solution**, deploying NEC's modular servers with distributed analytics stack, reducing setup time by **50%** for clients.

Education

- **M.Tech, Data Science & Engineering** – BITS Pilani (2020–2022)
- **B.Tech, Electronics & Communication** – GEIT, Dehradun (2007–2011)