

# DEEPAK SINGHAL

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## SUMMARY

I am an **AI-driven Senior Data Engineer (Analytics)** and continuous learner with **7 years of experience** building scalable, data-intensive systems. Passionate about leveraging data and intelligent technologies to solve complex problems, I bring strong expertise in Python, SQL, DBT, Databricks, Airflow, ETL pipelines, and Tableau.

## EXPERIENCE

**SPECTRAMD**, East Windsor, NJ

**Senior Data Engineer, Analytics** (Databricks | DBT | Tableau | SQL)

Feb 2023 – Present

- Increased healthcare readmission prediction accuracy by **25%** by engineering production-grade **DBT transformation pipelines** modeling patient outcomes, deployed on **Snowflake** and orchestrated via **Airflow**, enabling ML-ready datasets and downstream analytics in **Tableau**.
- Partnered with data scientists, analysts, and QA teams across global regions to ensure consistent business logic, high-quality feature datasets, and reliable data delivery for analytics and ML use cases.
- Reduced data infrastructure costs by **\$60K/month** by redesigning storage architecture using **Apache Parquet columnar formats**, improving query performance and large-scale analytical processing.
- Reduced manual operational overhead by **30%** by modernizing legacy ingestion workflows into automated **Airflow data pipelines**, improving data freshness, reliability, and observability.
- Improved compute efficiency by **50%** and reduced manual errors by **80%** by automating **Tableau publishing workflows** and implementing UAT validation for **40M+ row datasets**.
- Accelerated analytics delivery by **30%** by developing reusable **Python-based data quality frameworks**, enabling consistent reporting and validation across multiple healthcare data products.

**SPECTRAMD**, East Windsor, NJ

**Data Engineer, Summer Intern** (Python | DBT | Snowflake | Airflow)

May 2022 – Aug 2022

- Reduced data processing time by **40%** by designing and implementing a scalable healthcare data lake on AWS S3 and building ELT pipelines using **DBT, Snowflake, and Airflow**. Optimized analytical performance using **STAR schema modeling** and enabled business reporting through **Tableau dashboards**.
- Designed and implemented a **MS SQL Server data model** supporting automated date-wise backups and historical data retrieval, enabling visualization and monitoring of **800K+ monthly healthcare data records** to drive business insights.

**VOLKSWAGEN GROUP**, Gurugram, India

**Full Stack Developer, In-House** (MongoDB | AWS | Spring Boot)

Jan 2020 – Jul 2021

- Drove digital transformation and improved user experience by **20%** by integrating vehicle equipment services using **Spring Boot microservices** in an **AWS cloud environment** while contributing to development of the PRN platform.
- Increased online sales by **30%** by designing and implementing **authentication workflows, search APIs, and newsletter features** for a sales portal using **AEM, Java, and React**.
- Reduced data processing latency by 20% by designing an optimized **MongoDB (NoSQL) data architecture** to support real-time customer data for **~400K users** in a CMS application.

**SPECTRAMD**, Gurugram, India

**Software Developer, Engineering** (Java | SQL | Spring framework)

Jul 2017 – Dec 2019

- Reduced data processing time by **20%** by transitioning from monolithic architecture to a scalable **ETL pipeline** using **Spring Batch and Talend**, enabling efficient data integration into relational databases.
- Improved data reliability and reduced manual operational errors by 20% by automating binary processing and data analysis workflows using **Apache Camel and Jaspersoft**, streamlining production release processes.

## SKILLS

- Skills: Databricks, Spark, Airflow, DBT, Data Warehousing, Data Pipelines, Data Modeling, Data Visualization, Data Lake Architecture, Big Data Processing, Cursor AI, Agile, JIRA
- Certifications: Generative AI Fundamentals, Databricks Fundamentals, Alteryx Designer, PostgreSQL, Docker

## EDUCATION

**New England College (NEC)**, Henniker, NH

**Executive Master of Science in Artificial Intelligence**

Jan 2026 – Present

- Relevant Courses:** Artificial Intelligence Concepts, Data Analytics for AI.

**University of Illinois at Chicago (UIC)**, Chicago, IL

**Master of Science in Business Analytics**

Aug 2021 – Dec 2022

- Relevant Courses:** Machine Learning, Data Mining, Big Data Systems, Advanced Statistics, Data Visualization, Database Management.

**Thapar University**, Patiala, India

**Bachelor of Engineering**

Aug 2013 – Jun 2017