

Marmik Patel

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SUMMARY

Senior Solutions Architect with 8+ years of experience designing and modernizing cloud-native data platforms across Snowflake, Spark, and distributed ecosystems. Experienced in leading customer discovery sessions, translating business requirements into scalable reference architectures, and guiding organizations from solution design through implementation and post-migration optimization. Delivered enterprise modernization programs spanning 700+ databases, architected ingestion systems processing 1.2B+ rows/hour, and driven 20%+ infrastructure cost optimization.

PROFESSIONAL EXPERIENCE

Senior Solutions Architect – Squadron Data Inc., Overland Park, Kansas Jan 2023 – Present

Snowflake & AI-Driven Data Platform Architecture

- Led customer discovery workshops to assess legacy Hive/Spark ecosystems and define scalable cloud modernization strategies across 700+ databases and 4,500+ tables.
- Translated business and analytics requirements into Snowflake-native reference architectures covering ingestion, transformation, AI inference, governance, and cost management layers.
- Designed cloud-native ingestion frameworks using Snowpipe, Streams, Tasks, and Airflow supporting 40+ business units with real-time and batch workloads.
- Delivered a proof-of-concept (PoC) for an AI-powered ad-creative analytics platform using Snowflake Cortex to extract text, objects, and branding features from 10K+ creatives/day, validated performance benchmarks, scalability, and cost model prior to enterprise rollout.
- Advised stakeholders on warehouse scaling, workload isolation, and cost governance strategies reducing compute spend 20% while improving reliability to 99.8%.
- Produced architecture documentation and modernization playbooks accelerating customer adoption and long-term platform sustainability.

Big Data Engineer – Squadron Data Inc., Overland Park, Kansas Jan 2018 – Jan 2023

Enterprise Hadoop & Distributed Systems Modernization

- Led architecture assessment of 2,000+ node Hadoop clusters, profiling 150K+ Hive tables to define HDP → CDP migration blueprint.
- Designed automated compatibility and code validation framework across Spark, Hive, Sqoop, and Oozie, reducing migration defects 40%.
- Engineered high-throughput ingestion pipelines processing 1.2B rows/hour (10x improvement), reducing end-to-end query latency from 6 minutes to under 1 minute.
- Defined distributed table layout, partitioning, and storage optimization standards improving query performance 60%.
- Implemented secure multi-tenant architecture leveraging Kerberos, Ranger, Knox, and encryption controls.

ARCHITECTURE & TECHNICAL EXPERTISE

Platform Architecture: Distributed Data Systems Design, Snowflake & Spark Architecture, Real-Time & Batch Ingestion Patterns, Performance Engineering & Query Optimization, Cost-Aware Data Platform Design, Dimensional Modeling

Technologies : Snowflake, Apache Spark, Hadoop/CDP, Airflow, Kafka, dbt, Azure, AWS, Hive, Ranger

Programming : Python, SQL, Scala, Java, Bash Scripting

Certification : SnowPro Core Certified (2024)

EDUCATION

University of Missouri – Kansas City, MO Jan 2016 – Dec 2017

Master of Science in Computer Science, GPA: 3.95/4.00

Gujarat Technological University – Ahmedabad, India Aug 2011 – May 2015

Bachelor of Engineering in Computer Engineering, GPA: 8.6/10.00