

Nityendra K Singh
Cloud Data Data Engineer/Architect

PROFESSIONAL SUMMARY

- Seasoned Data Architect & Engineer with expertise in cloud-based data solutions, database architecture, data governance, performance tuning, and enterprise data management.
- Proven ability to design scalable data pipelines, enhance analytics, and drive ROI.
- Skilled in full-lifecycle development, including requirements gathering, data modeling, ETL/ELT, and analytics
- Industry experience across government (**FCC, IRS**), financial (**Citi Bank, Deutsche Bank**), and media (**RSG SYSTEMS**) sectors
- Led end-to-end data solutions, cloud migrations, and Agile project management, including user stories, sprint planning, and backlog analysis
- Public Trust Clearance** for government data systems, ensuring federal security compliance
- Certified Project Management Professional (PMP)**

TECHNICAL SKILLS

- Data Engineering & Architecture:** AWS (Glue, Redshift, S3, Athena, Lambda, EC2), Azure Data Studio, Snowflake, SQL Server, Oracle, PostgreSQL
- ETL & Data Pipelines:** AWS Glue (Python), Talend, Informatica, Apache Spark, PySpark, Scala
- Database Modeling:** Star Schema, Snowflake Schema, Erwin, Relational & Dimensional Data Modeling, Metadata Management
- Data Governance & Security:** IAM, Data Masking, Compliance Standards
- Programming & Scripting:** Python, SQL, R, PL/SQL, Shell Scripting, Scala, Java
- Business Intelligence & Reporting:** Power BI, Tableau, SAP Business Objects, Crystal Reports
- Optimization & Performance Tuning:** Query Optimization, Indexing, Partitioning, Parallel Processing
- Agile & Project Management:** Sprint Planning, Scrum, Backlog Analysis

INDUSTRY EXPERIENCE

United Association

Annapolis, MD

Cloud Data Engineer/Architect/ IT Contractor

Oct 2025 -till date(40 Hrs/week)

Architected event-driven, API-first, batch, and AI/ML-ready enterprise platforms enabling **business analytics and data warehouse solutions** for union membership systems leveraging **Azure and Microsoft Fabric (Container Services, Azure Functions, Data Factory, Lakehouse, Warehouse).**

Internal Revenue Service(IRS)

Washington, DC

Lead IT Specialist/Data Engineer (Policy and Planning)

Dec 2024-Sept 2025 (40 Hrs/week)

Environment: Azure Data studio, Python3.11, Nexus Repository, Microsoft PowerBI

- Collected and analyzed historical project performance metrics, including cost, hours spent, and data science insights
- Leveraged these metrics to improve future project estimation accuracy, enabling better decision making and resource Allocation
- Engaged in discovery of AI ML use cases in the agency.

Federal Communications Commission

Washington, DC

Sr. Data Architect/ Cloud Data Consultant (IT Contractor)

Apr 2020-Nov2024 (40 Hrs/week)

Environment: Python, Scala, AWS Redshift database, snowflake, AWS S3, AWS Glue, AWS Redshift Spectrum, Sybase 15.x, SQL Server 18.5, Erwin 2020 R1, postgresSQL14.6

- Served as a Data Architect SME, leading team in **data strategy development, metadata management, and enterprise data modeling**
- Setup of vector database (Milvus) & Postgres database for AI ML prompt engineering use cases
- Applied ER modeling for OLTP and leveraged data mining and analytics (DM&A) techniques to analyze large databases, reports, and SME insights
- Proficient in **Master Data Management tools**, ensuring data consistency, integrity, and governance across systems.
- Adept at **assessing and optimizing data landscapes**, including integration, security, and compliance, to align with organizational objectives
- Skilled in **data architecture design, API strategies, and interoperability solutions** to enhance data exchange
- Strong ability to **collaborate with stakeholders, evaluate emerging technologies**, and drive innovation in enterprise data management, cloud data engineering for USAC programs, enhancing data processing, analytics.
- Designed scalable **ETL pipelines** using AWS Glue, EMR, and Lambda, improving operational efficiency
- Optimized AWS storage solutions (S3, Redshift, DynamoDB, RDS) to enhance query performance and reduce costs

- Developed automated data processing workflows with AWS Glue, PySpark, and Apache Spark, managing large datasets efficiently. Implemented AWS IAM security & Redshift data masking, ensuring data compliance
- Architected and launched DataMart solutions for the FCC's Dashboard, streamlining reporting and analytics
- Led cross-functional teams as Data Architect SME, driving agile development and enterprise data strategies

Internal Revenue Service (IRS)

Lanham, MD

Sr. Data Architect/Warehousing/BI Consultant (IT Contractor)

Jun 2012-Apr 2020

Environment: Oracle12c/11g, PL/SQL, IBM DB2 9.7.x, SAP Business Objects XI R3,4.2, ER/Studio Data Modeler, IBM Data Architect

Affordable Care Act:

- Led DW/BI design & development for the Affordable Care Act Information Returns (AIR) System using agile methodologies
- Applied ER modeling for OLTP, focusing on data governance, MDM, and performance optimization
- Developed data mining & analytics (DM&A) solutions for large-scale databases, leveraging Tableau and Power BI
- Managed and optimized database performance, resolving issues affecting billions of records
- Created dynamic reports & visualizations using SAP Business Objects, Crystal Reports, Tableau, and JavaScript

IPM Reporting Universe Design and Development:

- Designed and developed IPM Reports, collaborating with stakeholders to define business needs
- Implemented ELT pipelines for BOE Analytic Reports on Oracle 11g & IBM DB2
- Built and optimized database objects (tables, materialized views, procedures) using PL/SQL, Toad, SQL*Plus
- Partitioned fact tables & materialized views, enhancing query performance
- Developed custom reports using SAP Business Objects & Universe Designer

Deutsche Bank

Prime Brokerage

New York, NY

Sr. Data Architect /Warehousing / BI Consultant (IT Contractor)

Jun 2007-Jun 2012

Environment: SQL Server 2012, Oracle 11 g, Oracle 10i, UNIX Solaris , Toad V 8.5, SAP Business Objects XI R3

iDelta Security Application:

- Developed ETL processes for data warehousing, managing FTP transfers across multiple servers
- Designed Star Schemas to align with business rules and enable multidimensional data access
- Developed WebI reports using multiple data providers, SSRS, and SSIS for data migration
- Backed up Universes & reports, maintaining logical and physical data models for warehouses
- Provided SQL optimization & troubleshooting, developing stored procedures using T-SQL & PL/SQL
 - Managed data loading via PL/SQL & SQL*Loader, integrating UNIX scripts
 - Optimized SQL/PL-SQL using EXPLAIN PLAN, Dynamic SQL, and advanced indexing techniques

RSG Systems, Inc.

New York, NY

Sr. BI Developer/ (IT Contractor)

Aug 2006-Jun 2007

Environment: Business Objects XIR2/6.5.1, WebI, BCA, Supervisor, Designer, Crystal Reports BO XCelsius 4.5, SQL, PL/SQL, Oracle 9i and Windows 2000, SQL Server 2008

AIMS - Advance Deal Inventory Management System – Metro Network:

Baywood Technologies

Jacksonville, FL

Sr. Developer (IT Contractor)

Mar 2004-Aug 2006

Environment: Sybase 11.6, Shell Scripts, T-SQL, ISQL, Crontab, ISQL, DB Artisan, Perl
EFISH (Electronic Fiber Flow and Scale House)

CitiBank

Jacksonville, FL

Lead Analyst (IT Contractor)

May 1999-Mar 2004

Environment: Oracle PL/SQL, Shell Scripts, SQL Server, T-SQL, ISQL, Crontab, ISQL, DB Artisan, Perl, Visual Basic

EDUCATION

Jawaharlal Nehru University | *Master of Science in Computer Science*

New Delhi, India

Meerut University | *Master of Science in Physics, Specialization in Electronics*

Meerut, India

University of Allahabad | *Bachelor of Science in Mathematics, Statistics, Physics*

Allahabad, India

CERTIFICATION & TRAINING

- Online learning and AWS Cloud Training 2019
- SAP / Business Objects (Universe Design & Reports) 2012
- Introduction to Market – Stock Trading (New York University 2009)
- Business Intelligence (Micro Strategy, Sybase IQ and Data Warehousing Concepts (Sybase)