Nithish Bilasunur Manjunatha Reddy

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SUMMARY

· Experienced Data Engineer with a focus on scalable ETL pipelines

· Skilled in real-time data processing, predictive modeling, and cost optimization

· Proficient in Python, SQL, and advanced data integration techniques

· Master's in Data Analytics Engineering, committed to driving data innovation

EDUCATION

George Mason University — **Aug 2023 - May 2025**
Master of Science in Data Analytics Engineering (STEM) — *Fairfax, VA*

Bangalore Institute of Technology — **Aug 2016 - Oct 2020**
Bachelor of Engineering in Electronics and Communication — *Bengaluru , India*

WORK EXPERIENCE

Center for Air Transportation Systems Research (CATSR), George Mason University — **Jan 2025 - May 2025**
Data Engineer — *Fairfax, VA*

- Conducted cross-sectional analysis of airline data from BTS and Yahoo Finance, uncovering unique trends in stock behavior and providing insights that improved executive decision-making
- Built a hybrid cloud-local architecture, enabling real-time forecasts via AWS and long-term model training via GitHub and local CSVs, reducing cloud storage costs by 80%.
- Processed over 2 million records across 5 BTS data types using pandas and SQL-like operations, implementing quarterly normalization and lag feature creation for model readiness.
- Secured multi-source data integration from Yahoo Finance and BTS using AES-256 S3 encryption and IAM-controlled access, ensuring compliance with academic data governance standards.

Manuh Solutions — **Nov 2020 - Jun 2023**
Data Engineer — *Bengaluru*

- Built scalable ETL pipelines and automated data ingestion for a U.S. healthcare provider, achieving 99.9% data accuracy and improving pipeline efficiency by 15% using Python and optimized PostgreSQL.
- Migrated and transformed large-scale legacy healthcare data, ensuring integrity and governance compliance through complex logic and secure data modeling practices.
- Designed and implemented data warehouse and HR analytics solutions, enabling leadership to track performance, compliance, and staffing metrics across sensitive clinical systems.
- Enhanced SQL query performance by 30% and reduced pre-deployment issues by 20% through advanced indexing, DML/DDL optimization, and proactive code reviews.

BEL - Bharat Electronics Limited — **Dec 2019 - Mar 2020**
Data Analyst — *Bengaluru*

- Engineered a real-time ETL pipeline for thermal monitoring in Indian Navy vessels, improving system responsiveness and reducing overheating incidents by 30%.
- Automated ingestion of sensor data via Python and MySQL, enabling predictive analytics for dynamic cooling and cutting energy consumption by 20%.
- Designed interactive Tableau dashboards to track thermal KPIs, reducing manual diagnostics time by 40% for on-board engineering teams.
- Applied statistical models for thermal forecasting, improving operational safety and extending system longevity in mission-critical naval environments.

PROJECTS

SmartVault – AWS-Based EC2 Backup Automation System

- Automated EC2 snapshot creation and lifecycle management using tag-driven AWS Lambda workflows, enabling hands-free backup operations.
- Integrated real-time backup monitoring by streaming custom compliance metrics to CloudWatch with alarms, improving visibility and system reliability.
- Reduced storage costs and manual intervention by implementing snapshot retention policies and CI/CD pipelines to deploy Lambda functions from versioned S3 artifacts.

Kafka Stock Market Data Pipeline - Data Streaming & ETL

- Designed and deployed a streaming data pipeline using Apache Kafka, AWS S3, Glue, and Athena to simulate real-time stock market data processing and querying.
- Built Kafka Producer and Consumer in Python to enable seamless ingestion into S3, optimizing data workflows to handle high-volume streams and improve performance by 40%.
- Implemented robust access control using IAM roles and AWS best practices to ensure end-to-end data security and compliance.
- Ensured data security & compliance by implementing IAM roles and AWS best practices for access control and permissions.

Netflix Data Visualization with Amazon Quick Sight

- Created interactive dashboards in Amazon QuickSight to visualize Netflix content distribution across genres, countries, and timeframes.
- Enabled real-time data filtering and custom dashboard views for stakeholders, improving insight delivery and accessibility.
- Streamlined integration between Amazon S3 and QuickSight by configuring secure access policies and data loading workflows.

TECHNICAL SKILLS

- **Programming & Data Analysis**: Python, Microsoft SQL Server
- **Database Engineering**: Data modeling, ETL processes, Data migration, Data warehousing, Database design, Data Manipulation, Algorithms, Data Lake, DBT
- **Tools**: AWS Lambda, AWS S3, Amazon BedRock, Amazon DynamoDB, Apache Kafka, AWS Quicksight, Git, Microsoft Excel, AWS EventBridge, AWS CodePipeline

CERTIFICATIONS

- AWS Certified Solutions Architect – Associate