Ritika Tilwalia

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SUMMARY

Data Engineer/ETL developer with 3+ years' experience building data pipelines, models, and optimizing processes in healthcare and supply chain domains. Skilled in analysis, prediction, and driving performance improvements.

EDUCATION

The University of Texas at Dallas **Dallas, TX, USA**
Master of Science in Information Technology and Management - 3.78/4 *Aug 2022 - May 2024*

Guru Gobind Singh Indraprastha University **Delhi, DL, India**
Bachelor of Technology in Computer Science - 3.5/4 *July 2017 - June 2021*

TECHNICAL SKILLS

Certifications: Data Engineering Zoomcamp, Big Data Hadoop, Microsoft Azure Fundamentals (AZ-900)
Programming Languages: Python, T-SQL, R, PySpark, SparkSQL
Libraries and Tools: Seaborn, Sklearn, Pandas, Numpy, Tensorflow, Git, Docker, GCP, Azure, CI/CD
Analytic tools: Snowflake, SSMS, Talend Open Studio, Advanced Excel, Tableau, PowerBI, DBT
Knowledge Areas: Predictive Modeling, Machine Learning, Data Mining, Big Data Analytics, Data Warehouse, Apache Hadoop, Supply Chain, Cost Analytics

WORK EXPERIENCE

Pitney Bowes **Remote, US**
Data Analytics Engineer (Snowflake, T-SQL, Python, Tableau, Confluence, Jira, AWS, DBT) *June 2023 - May 2024*

- Constructed a data pipeline to calculate parcel loss, **improving loss prevention savings by $193k.**
- Developed data pipeline to calculate mis shipped delivery parcels optimize delivery processes, **resulting in a 50% reduced effort and $755k in performance savings.**
- Developed T-SQL model to improve 5D delivery visibility to analyze rural vs. non rural impact and **optimized process by 20%** by implementing tableau dashboard.
- Initiated in-depth analysis and devised calculation metrics to **predict 30+ network data, achieved 0.83 AUC.**

Tata Consultancy Services **Remote, India**
Data Engineer (Talend Open Studio, MySQL, Oracle, Git, SSMS, WinSCP, Putty) *June 2021 - July 2022*

- Designed and implemented client required solutions on **ad-hoc queries biweekly, reduced 20% workload.**
- Engineered robust ETL pipeline, integrating specialty Rx data streams to handle over 2 million records daily, **to reduce processing time by 30%.**
- Implemented JCF changes in 200+ full and incremental refresh jobs for data integrity in Specialty Rx data lifecylce by analyzing ETL architecture and **increased performance by 30% and annual cost reduction of $700k.**
- Executed queries and procedures for data validation using test cases in target and staging tables, **reducing manual efforts by 15%**. Deployed 200+ jobs in the production server.

MAIT, Research & Development Lab **DL, India**
Research Assistant (Python, Machine Learning, Git, Swarm Intelligence, Jupyter notebook) *Nov 2019 - Dec 2020*

- Programmed and evaluated swarm intelligence algorithms (PSO, Cuckoo search, GWO and ACO) in Python to predict highest average of **78% accuracy in electricity consumption of smart homes.**
- Led a collaborative effort to organize and lead the proceedings for the conference ICICC (2020).
- Published Papers
  - Optimization of Electricity Consumption Using Grey Wolf Algorithm published in IEEE (2020)
  - Optimization of Electricity Consumption Using Evolutionary Algorithms published in SSRN (2020)

PROJECTS

- **Fashion campus data pipeline**, Engineered a robust data pipeline for Fashion Campus using GCP; integrated Kaggle data, automated ingestion with Mage, and crafted ETL processes in DBT while enhancing data visualization in Looker, **improving decision-making speed by 35%.**
- **Uber fare price prediction Using Regression in R**, Evaluated and visualized dataset variables for Uber fare prediction using R; compared linear, multilinear, ridge, and lasso regression models; **achieved 78% accuracy** with lasso regression, **optimizing fare price predictions by 20%.**
- **Stock price prediction using Machine Learning and Sentimental Analysis**, Executed a data cleaning technique for tweets, performed sentiment analysis using Python libraries, merged sentiment scores with stock data from Yahoo Finance, and **predicted future stock prices with 70-83% accuracy** using TensorFlow, RNN, and random forest classifier.