Vandan Vaishya

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SUMMARY

Enthusiastic Computer Science student pursuing a Master's degree, with a strong passion for learning new technologies, problem-solving through innovative solutions, and fostering a collaborative and engaging work environment. Highly motivated to tackle complex challenges, drive business efficiency, and take on responsibilities beyond expectations.

WORK EXPERIENCE

Associate Engineer

Datametica Birds(Onix), Pune, India   July 2021 – May 2023

- Converted **100+ KSH and BTEQ Teradata scripts** to **BigQuery-compatible scripts**, ensuring seamless migration with minimal errors. Automated **50% of the manual conversion process using Python**, reducing human error and improving efficiency recognized by senior architects and clients for its impact on accelerating the migration process.

- Led a **team of 3 engineers** to successfully **migrate 15,000+ views** from Teradata to BigQuery. Optimized workflows, reducing errors by **40%** through **lineage-based sorting and execution of views**, along with **record count and column structure validation**. The effort was **acknowledged by stakeholders** for streamlining the migration and ensuring timely project delivery.

- Designed a **data ingestion framework** leveraging **Python and Bash** to automate **BigQuery Data Transfer Service (BQ-DTS)** for seamless data ingestion from Teradata to BigQuery, reducing manual intervention by **60%** and improving pipeline efficiency.

- Utilized **Google Cloud Dataflow** to seamlessly ingest unsupported file formats in BigQuery like fixed-width and Excel, enhancing data ingestion flexibility and minimizing preprocessing efforts by **40%**. This solution was praised by the product team for its robustness and scalability.

- Worked within an **ETL workflow environment**, conducting **dry runs and real-data testing** to validate data pipelines before production deployment, ensuring reliability and accuracy in data processing.

- Conducted **root cause analysis (RCA)** on **ETL failures**, successfully resolving **30+ critical issues** through close collaboration in **daily standups and client meetings**. This proactive approach improved system stability and was **commended by leadership**.

ACADEMIC PROJECT EXPERIENCE

Steganography with Generative Adversarial Networks (GANs) [(Link to Project)](#)   Oct 2024 – Dec 2024

- Developed a DCGAN-based steganography model, achieving 30% higher data retrieval accuracy and enhancing secure data transmission.
- Learned: Advanced GAN training, hyperparameter tuning, and handling large-scale datasets for secure data embedding.

CIFAR-100 Image Classification with Optimized Deep Learning Training [(Link to Project)](#)   May 2024 – Sept 2024

- Developed and trained a deep learning model for multi-class image classification using CIFAR-100, optimizing convergence speed and accuracy across SGD, Adam, RMSprop, and Gradient Centralization (GC) optimizers.
- Learned: Deep learning optimization techniques, hyperparameter tuning, and evaluating model efficiency across different training methodologies.

Integration of Crime Databases for Predictive Analysis [(Link to Project)](#)   Jan 2024 – April 2024

- Built a Unified Crime Database integrating NYPD & Chicago datasets, improving crime classification accuracy to 85% using BERT models.
- Learned: Data preprocessing, NLP-based text similarity analysis, and integrating large, unstructured datasets for predictive analytics.

SKILLS

Programming: Python (Pandas, NumPy, scikit-learn, Tensorflow, Keras, Pytorch), SQL, Bash, R
Software Development: Object-Oriented Programming (OOPs), Data structures, Algorithms, Linux, Docker, Google APIs, Terraform
Machine Learning & Stats: Scikit-learn, XGBoost, StatsModels, Pandas, NumPy, SciPy
Data Wrangling & ETL: Python (Pandas, PySpark), SQL (complex joins, CTEs), dbt
Data Warehousing: Google BigQuery, Snowflake, Redshift (basic knowledge)
Model Deployment & Monitoring: Flask, Streamlit, MLflow, Airflow
Visualization & BI Tools: Tableau, Power BI, Looker
Soft Skills: Communication, Problem Solving, Cross-Functional Collaboration, Agile Development, Technological Adaptability

EDUCATION

Masters of Science, Computer Science

Illinois Institute of Technology, Chicago, IL   Aug 2023 - May 2025

Bachelors of Engineering, Computer Engineering

University of Pune, India   Aug 2017 - April 2021