

Manoj Kumar Ashok

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EDUCATION

DePaul University

Chicago, IL

Master of Data Science, Concentrated on computational methods - **GPA: 4.0/4.0**

Jan 2024 – Nov 2025

Coursework: Data analysis and regression, **Mining Big data**, Advanced Machine Learning, Fundamentals of Data Science, Advanced Data analysis, Database processing for large scale analytics, **Neural Networks and Deep Learning**, **Natural Language Processing**.

TECHNICAL SKILLS

Languages & Developer tools : Python, R, SQL, RStudio, SQL Server, Kafka, Git, hadoop, Apache spark

Database Management: Database Management: MySQL, RDBMS (Oracle), Hive, MongoDB, ETL, Airflow, SSIS

Cloud platforms: Data pipelines- Azure data factory, AWS-redshift, Big Query, Dataflow

Visualization: Matplotlib, Seaborn, ggplot2, Tableau, PowerBI, quickSight, snowflake

EXPERIENCE

Software Developer - Data Engineering team

Jan 2023–July 2023

Zoho Corporation

Chennai, India

- **Developed and optimized data processing** scripts using **Python** and **SQL** to automate the **extraction, transformation**, and analysis of large datasets from Zoho CRM and Zoho Books, resulting in a **20%** increase in **data management** efficiency.
- Engineered custom solutions for data visualization and reporting using **Tableau** and **Microsoft Excel**, integrating advanced **SQL queries** and automating **data pipelines**, which improved business process insights and decision-making.
- Designed and implemented **data models** and **statistical analysis** workflows to track key trends in support data, improving customer issue resolution by **10%** through more efficient querying and reporting.
- Collaborated with cross-functional teams to architect and deploy scalable **ETL pipelines** using **Airflow** and optimize **data processing** workflows, reducing processing time by **15%** and ensuring reliable data flow across systems.

PROJECTS

Speech Emotion Detection using Deep Learning | *TensorFlow, SVM, NumPy, Matplotlib*

July 2023

- * Developed a Speech Emotion Detection model in **Python**, achieving **85%** accuracy using **TensorFlow** and **SVM**, with audio feature extraction performed by LibROSA (e.g., MFCC, Chroma, and Mel Spectrogram).
- * Optimized **data preprocessing** with **NumPy**, reducing computation time by **30%**, while maintaining **pipeline** versioning and collaboration with **Git**.
- * Enhanced emotion classification accuracy by **25%** through advanced feature engineering and hyperparameter tuning techniques using **Scikit-Learn**.
- * Visualized model performance and insights using **Matplotlib**, increasing the efficiency of data interpretation by **20%**.

Predictive Analysis for credit limit | *Python, Scikit-Learn, TensorFlow, SQL, Pandas, NumPy,*

July 2024

- * Developed a machine learning model using **Python**, **Scikit-Learn**, and **TensorFlow** to derive predictive insights from raw financial data, improving prediction accuracy by **20%** through feature scaling, normalization, and applying **Ridge** and **Lasso Regression** to reduce overfitting and enhance model generalization.
- * Preprocessed data with **Pandas** and **NumPy**, reducing anomalies by **25%** and increasing model accuracy by **18%** through feature scaling, outlier detection, and data normalization.
- * Used advanced **feature engineering** and hyperparameter tuning, boosting model performance by **22%** and validating results through cross-validation. Evaluated models using **RMSE**, **MAE**, and **R²**.
- * Enhanced **data pipeline** efficiency with **SQL**, streamlining data extraction for scalable machine learning pipelines, and visualized insights with **Matplotlib** for effective communication.
- * **Optimized the data flow** for batch processing using **cloud services** (Azure Data Factory/AWS Data Pipelines) to manage large-scale data efficiently.