GOPICHANDH GURRAM

Data Scientist | MACHINE LEARNING ENGINEER | DATA ANALYST | Python Developer

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Summary

Results-driven Data Scientist with a strong foundation in data analytics, **machine learning**, and **statistical modeling**. Experienced in extracting insights from complex datasets to drive data-driven decision-making. Skilled in Python, SQL, and data visualization tools like Tableau and Power BI. **Adapt** at building predictive models, optimizing processes, and presenting actionable **insights**. Strong **problem-solving** abilities with experience in real-world projects, including network infrastructure optimization and social media analytics. Seeking opportunities to leverage analytical skills in a dynamic environment to **solve** business challenges and enhance operational efficiency.

Education

Clark University 08/2023 - 05/2025

MSc - Data Analytics GPA: **3.7** / 4

- Mathematics & Statistics
- Python with libraries
- SQL(PostgreSQL)
- Data Mining with Splunk
- Tableau & Power BI
- Linear Regression & Time Series
- Machine Learning (Regression & Classification)
- Deep Learning (NN, CNN, RNN)
- Cyber Security

GNA University 08/2023 - 05/2025

B.Tech – Aerospace GPA:8.1/10

- MATLAB & Simulation
- Auto CAD
- ANSYS

Experience

ESM SQUARE TECHNOLOGIES PRIVATE LIMITED Bangalore

Project: Sales Performance Optimization **08/2021 – 03/2023.**

Overview: We enhance sales performance by analyzing transaction data to optimize pricing, inventory, and marketing strategies.

Key Objectives:

- Sales Trends Analysis: Identified seasonal trends, peak sales, and underperforming products.
- Customer Segmentation: Segmented customers for targeted marketing campaigns.
- Price Sensitivity: Analyzed pricing strategies to maximize sales across segments.
- Inventory Forecasting: Developed predictive models to optimize inventory and reduce stockouts.

Role as Data Analyst:

- Data Integration: Collected and centralized sales, inventory, and customer data.
- **ETL** (Extract, Transform, Load) tools used for data integration from different sources (CRM systems, transaction logs).
- Exploratory Data Analysis (**EDA**): Identified patterns in sales performance across dimensions.
- SQL & Python: Extracted and analyzed data using SQL and Python for predictive modeling.
- Dashboard & Reporting: Created real-time dashboards in **Power BI** for stakeholder insights.
- Predictive Analytics: Developed models to forecast future sales trends.

Outcome:

- **15%** Sales Increase: Through optimized pricing and inventory strategies.
- **20%** Conversion Rate Improvement: Resulting from effective customer segmentation.
- Improved Efficiency: Reduced stockouts by **10%** and excess inventory by **5%.**

Projects

Automated ML Systems:

Description: An Automated Model System streamlines the **end-to-end** machine learning workflow, from data preprocessing and model training to deployment and monitoring. It automates tasks such as feature engineering, **hyperparameter tuning**, and **performance evaluation**, **reducing** manual effort and improving efficiency. These systems enhance scalability, ensure reproducibility, and enable real-time decision-making in applications like fraud detection, predictive maintenance, and recommendation systems.

- Efficient Model Development – **Reduced** time and effort needed for data preprocessing, feature selection, and model training.
- Improved Model Performance – **Optimized hyperparameters** and automated retraining to keep high accuracy and reliability.
- Implemented multiple machine learning algorithms and leveraged techniques such as cross-validation and grid search for optimal model selection.
- Reduced Manual Effort – Automation minimizes human intervention, improving **productivity** and **consistency**.
- **Optimized Model Performance:** Integrated advanced optimization techniques to automatically compare multiple ML algorithms, enhancing accuracy and scalability for real-world predictive analytics applications.
- Reduced the manual workload of data scientists by automating repetitive tasks, significantly accelerating model development and testing processes.

Attendance Tracker by Face Recognition:

Description: Developed an AI-powered facial recognition system for automated attendance tracking, reducing manual errors and improving efficiency.

Technologies used: Python (**OpenCV**, **TensorFlow**, **PyTorch**), **Machine Learning**, Deep Learning (**CNN**, **CV**).

Key Contributions:

- Designed and implemented a **real-time face detection and recognition** system.
- Developed an **automated attendance logging** mechanism with secure database integration.
- Implemented **anti-spoofing techniques** to prevent unauthorized check-ins.
- Built **interactive dashboards** to analyze attendance trends and generate reports.
- **Impact:** Improved attendance tracking efficiency by **40%**, reduced errors, and enhanced security.

Retail Sales Analysis – SQL:

Description: This project is designed to demonstrate SQL skills and techniques typically used by data analysts to explore, clean, and analyze retail sales data. The project involves setting up a retail sales database, performing exploratory data analysis (EDA), and answering specific business questions through SQL queries. This project is ideal for those who are starting their journey in data analysis and want to build a solid foundation in SQL.

Key Responsibilities:

- Designed and managed a relational database (p1_retail_db) for structured data storage.
- Cleaned and processed sales data using SQL queries to ensure data accuracy and integrity.
- Conducted Exploratory Data Analysis (EDA) to identify sales trends, peak periods, and high-value transactions.
- Developed SQL queries to analyze customer purchasing behavior and optimize inventory management.
- Created performance reports and dashboards to provide actionable business insights.

Tools & Technologies: **SQL** (MySQL/PostgreSQL), **Tableau/Power BI**, **Excel**.

Outcome:

- Enhanced sales forecast accuracy by **15%**, improving stock management.
- Identified high-value customers, increasing targeted marketing efficiency by **20%**.
- Reduced stockouts by **10%**, optimizing product availability and sales revenue.

Network Switch Utilization Analysis – Clark University:

Description: Analyzed network switch utilization data to optimize infrastructure efficiency and reduce operational costs. Extracted and processed nine months of historical data to identify underutilized switches and assess consolidation opportunities. Developed dashboards using Power BI to visualize utilization trends and predict potential reactivation service requests. Provided actionable insights to support decision-making for network optimization and cost reduction.

- Analyzed nine months of historical switch utilization data to optimize network costs.
- Identified underutilized switches and provided data-driven recommendations for consolidation.
- Used heatmaps and bar charts to visualize utilization patterns and potential cost savings.

Customer Churn Prediction:

Description: Developed a machine learning model to predict customer churn for a telecom company using historical customer data, aimed at identifying high-risk customers and improving retention strategies.

Skills Used: **Machine Learning**, **Feature Engineering**, **Data Visualization**, **EDA** (Exploratory Data Analysis), Model Optimization.

- Implemented multiple machine learning algorithms such as Logistic Regression, Random Forest, and XGBoost to predict customer churn. Optimized models using hyperparameter tuning (GridSearchCV) for better accuracy.
- Perform feature engineering to extract insights from customer interaction patterns.
- Develop a dashboard to visualize churn probabilities and retention strategies.

Skills

- Mathematics & Statistics
- Excel (Advanced)
- SQL (PostgreSQL)
- Tableau & Power BI
- Python (NumPy, Pandas, Matplotlib)
- R (Statistical Analysis)
- Machine Learning (Scikit learn, Keras, TensorFlow, PyTorch)
- Deep Learning (NN, ANN, CNN, RNN, CV)

Certificates

- **Machine Learning Pipelines with Azure**
  Coursera
  https://www.coursera.org/learner/gcr-certificates.
- **Data Science**
  BCGX – Forage
  https://www.theforage.com/profile/5LfZhxFN3HzwJ6YG7
- **Data Science – British Airways**
  Forage
  https://www.theforage.com/profile/5LfZhxFN3HzwJ6YG7
- **Introduction to MATLAB**
  Vanderbilt University
  https://www.coursera.org/learner/gcr-certificates.

Achievements

- **30% Merit based Scholarship**
  Academic scholarship for academic excellence
- **Top 5% in Kaggle competition**
  Analyzed and predicted Housing Price using ML Algorithms.
- **Forecasting Accuracy**
  Improved forecasting accuracy by 20% using advanced Time-series models
- **Data Retrieval Efficiency**
  Reduced data retrieval time by 25% through efficient data structuring methods.
- **Model Performance**
  Enhanced model performance by automating hyperparameter tuning for a 15% accuracy.
- **Automated Data Cleaning**
  Reduced manual data processing efforts via automation