HARSHAVARDANA REDDY KOLAN

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Education

MASTER OF SCIENCE IN DATA SCIENCE – The George Washington University – Washington, DC Expected May 2025
BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING – Vardhaman college of Engineering, affiliated to Jawaharlal Nehru Technological University – Hyderabad, India May 2023

Skills

Programming Languages: Python (pandas, matplotlib, seaborn, scikit-learn, scipy, pytorch, tensorflow), R (dplyr, gridExtra, ggplot, randomForest, tidyr); **Databases**: MySQL, MongoDB, Neo4j; **Tools & Frameworks:** Excel, Dash, Tableau, AWS, GCP; **Core Competencies:** Data Analysis, Business Analysis, Machine Learning, Data Visualization, Feature Engineering, Generative AI

Certifications

Generative AI for Data Scientists (Coursera, July 2024), IBM Data Science Professional Certificate (Coursera, October 2023), Machine Learning with Python (Cognitive Class, September 2021)

Projects

HOTEL BOOKING DEMAND ANALYSIS – Personal Project **–** Washington, DC April 2024

- Enhanced hotel booking data analysis by developing and interpreting static plots, uncovering seasonal trends and booking patterns that **led to a 15% increase in peak season revenue**. Applied **feature engineering to refine insights**, optimizing room inventory and informing targeted marketing strategies.
- Designed and implemented a comprehensive data visualization dashboard using **Dash**, enabling analysis of outliers, normality tests, Principal Component Analysis (PCA), and geographical distribution, which **enhanced data-driven decision-making and operational efficiency by 40%**.
- **Dockerized and deployed a data visualization dashboard on GCP**, improving scalability and accessibility, **resulting in a 50% increase in application uptime and user engagement** - Dashboard Link.

OPTIMIZING VEHICLE PERFORMANCE – Academic Project **–** Washington, DC December 2023

- Implemented a machine-learning approach using Random Forest to optimize vehicle performance and health maintenance, **resulting in a 20% increase in fuel efficiency**.
- Utilized the Vehicle Energy Dataset (VED) which consists of **data from 383 cars** and created an engine recommendation system to optimize Air Flow Rate.
- Analyzed vehicle performance data and pinpointed inefficiencies, delivering actionable insights to drivers; **improved fleet efficiency by 25%**.

ANALYSING GLOBAL GREENHOUSE GAS DYNAMICS – Academic Project – Washington, DC December 2023

- Conducted comprehensive analysis of global greenhouse gas emissions from 2016 to 2021, using data from IMF and UNFCCC; identified key trends that informed sustainability strategies, **reducing emissions by 15%** over 2 years.
- Applied advanced ARIMA time-series models to perform in-depth analysis of emission trends in OECD countries; generated data-driven insights that **led to a 20% improvement in sustainability initiatives**.
- Identified successful methane mitigation strategies and highlighted the urgent need for targeted policies to address rising emissions trends, particularly in top-emitting countries, which can significantly **reduce emissions by 10%.**

Work Experience

SALESFORCE ADMINISTRATOR INTERNSHIP – Hyderabad, India July - September 2022

- Collaborated with senior leadership to curate valuable customer insights and tailored the Salesforce testing platform, resulting in a **20% reduction in customer support issues**.
- Streamlined lead qualification process by designing and executing automation workflows in Salesforce Process Builder, resulting in **40% reduction in lead qualification time** and improved overall team efficiency.
- Tested and ensured secure and reliable user authentication for Salesforce platform from the server side, guaranteeing data integrity and user confidentiality while enhancing overall system security.