

# HARSHAVARDANA REDDY KOLAN

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## Education

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**MASTER OF SCIENCE IN DATA SCIENCE** – The George Washington University – Washington, DC

Expected May 2025

Majors: Data Warehousing, Data Mining

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE** – Vardhaman college of Engineering, affiliated to Jawaharlal Nehru Technological University – Hyderabad, India

May 2023

Majors: Machine Learning, Deep Learning, Data Visualization.

## Skills

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**Python** Libraries: pandas, matplotlib, seaborn, scikit learn, scipy, statsmodel; **R Programming** Packages: dplyr, gridExtra, ggplot, randomForest, tidyr; **Databases** Software: MySQL, MongoDB, Neo4j.

## Certifications

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IBM Data Science Professional Certificate (Coursera, October 2023), Machine Learning with Python (Cognitive Class, September 2021)

## Projects

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**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.
- Identified and analyzed underperforming vehicles within the dataset, providing drivers with actionable insights to improve vehicle performance.

**ANALYSING GLOBAL GREENHOUSE GAS DYNAMICS** – Academic Project – Washington, DC

December 2023

- Conducted comprehensive analysis of global greenhouse gas emissions from 2016 to 2021, leveraging data from reputable sources such as the IMF and UNFCCC, to identify trends and patterns for informed decision-making, enabling impactful sustainability strategies.
- Developed and executed an in-depth analysis using advanced statistical models (Linear Regression, ARIMA) to evaluate sector contributions and emission trends in major economies.
- Identified successful methane mitigation strategies and highlighted the urgent need for targeted policies to address rising emissions trends, particularly in top-emitting countries like China, which can significantly reduce emissions by 10%.

**COMPARATIVE ANALYSIS OF DATABASES** – Personal Project – Washington, DC

December 2023

- Compared Neo4j (graph-based), MongoDB (document-oriented), and traditional SQL databases to determine their performance, scalability, and suitability for different applications.
- Accomplished practical experiments with sample datasets to identify the strengths and weaknesses of each database, which would help developers and organizations improve their performance by 25%.

## Work Experience

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**SALESFORCE ADMINISTRATOR INTERNSHIP** – Virtual

June - October 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.