MadhuSudhanReddy Puppala

Data Analyst

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SUMMARY

Aspiring data analyst seeking to utilize analytical capabilities to unlock value from data through compelling data stories and cutting-edge visualizations. Graduate student closely monitoring trends in the auto industry.

EDUCATION

California State University, East Bay, CA **2022 – Present**

Master of Science, Business Analytics **GPA: 3.42**

Coursework: Database Management & Applications, Data Analytics, Data Mining, Machine Learning, Text Mining & Social Media Analytics, Data Warehousing & Business Intelligence, Optimization Methods for Analytics, Big Data Technology & Applications, Time Series Analysis, Statistics,
Predictive HR Analytics, Data Science

CVR College of Engineering, Hyderabad, India **2017 - 2021**

Bachelor of Technology, Mechanical Engineering

Graduated Magna Cum Laude

Expertise in Operations Research, CAD/CAM, Modelling, Finite Element Analysis

Projects: Fatigue life prediction of In-wheel suspension system, Failure Analysis of Kevlar Epoxy Composites with Alterations on Fiber orientation.

TECHNOLOGIES

Reporting / Data visualization Tools: Tableau, Power BI, Microsoft Excel Pivot Tables
Language: Python, R, SQL, pyspark
Tools: Jupyter Notebook, R Studio, Microsoft Excel, Postman, SPSS
Cloud: Amazon Web Services, Git, Hadoop, Hive, Pig, Spark, Azure, Heroku, MongoDB, Confluent
Methodologies: Agile Scrum, Waterfall, Pickle, JSON, YAML, KAFKA
Skills: Creative Thinking, Critical Thinking, Data Selection, EDW, Data Extraction, Insights from data, Business Insights Storytelling, Highly Data Driven, Self-motivated, Excellent Communication Skills, Problem Solving, Decision making, Predictive Modeling

EXPERIENCE

Graduate Assistant **Aug 2023 - Present**

California State University, East Bay *Oakland, CA*

- Independently conceptualized, developed, and executed a data analysis staffing dashboard project resulting in a 20% improvement in staffing efficiency.
- Utilized advanced data manipulation techniques, visualization libraries, and programming languages such as Python, Tableau, and Excel to create interactive and informative dashboards, contributing to a 15% increase in data accessibility.
- Implemented features enabling dynamic data exploration, trend analysis, and data-driven decision-making, leading to a 25% reduction in decision-making time.
- Conducted thorough data cleaning and preprocessing, resulting in a 30% enhancement in data accuracy and reliability for meaningful insights.
- Communicated findings and actionable recommendations through clear and concise visualizations and reports, fostering a 40% improvement in decision comprehension among stakeholders.

Data Analyst **Aug 2021-Aug 2022**

Printoonistic Pvt. Ltd. *Hyderabad, India*

- Analyzed sales data for printed apparel and accessories, optimized 60% inventory based on design popularity.
- Utilized web analytics (adobe analytics) tools to track e-commerce user behavior, enhancing the online shopping experience.
- Collaborated with design team to create personalized products aligned with customer choices and result in 25% raise in sales.
- Implemented data-driven strategies for supply chain optimization, reducing excess inventory by 15%.
- Contributed to data-driven and digital marketing strategies like SME, SEO for targeted promotions.

PROJECTS

- **Life expectancy and causes of death for Top Economies:** spearheaded an in-depth examination of global health trends with a focus on life expectancy and causes of death. Through precise visualizations and regression modeling, my objective was to unravel the intricate factors influencing health outcomes across diverse countries and regions. The analysis unveiled consistent high life expectancies globally, emphasizing enduring health patterns. Noteworthy findings included the correlation between higher GDP and elevated life expectancies, gender disparities favoring females, and Russia's lower life expectancy requiring further investigation. Additionally, the study shed light on respiratory challenges in China and India, signaling the need for interventions in rapidly industrializing nations. My role showcased expertise in utilizing data analysis techniques to uncover valuable insights into complex health dynamics, contributing to informed decision-making in the field.

- **Real Estate Analysis - California Bay Area:** Scrapped 2.5k rows of housing data from Redfin with 30 features and performed data cleansing, EDA, and built a machine learning model (XGBoost) to predict house prices with an R2 value of 0.98.

- **Analysis of State weather based on zip codes:** Analyzed the state weather by plotting graphs and heated maps using pandas and matplotlib. Graphs plotted: Stacked bar chart of maximum temperature of each state zip code and Line graph of average temp of each zip code. Concluded with high temperature areas month wise and plotted a heated map on base map.

- **Big Data: Weather Data Analysis**: Developed Mapper and Reducer application to calculate monthly sky ceiling height range. Created PySpark application to compute average visibility distance per USAF station. Utilized Pig for calculating sky ceiling height range by station ID. Employed Hive for computing average sky ceiling height by station ID.

- **Predicting fatigue life of In-wheel Suspension System:** Designed and implemented an in-wheel suspension system for a wheelchair tailored to enhance mobility and comfort for individuals with disabilities. This project involved CAD/CATIA modeling, prototype fabrication, and extensive testing using ANSYS. The collaborative effort resulted in improved wheelchair performance and user experience, demonstrating problem-solving and technical documentation skill.

- Led a cross-functional team at Printoonistic Pvt Ltd to implement a cutting-edge '**Custom Design Personalization Project**" that revolutionized the apparel and accessories industry. Integrated user-friendly design tools, enabling customers to easily personalize items and boosting sales by 25% within the first quarter.

- **Real-Time Data Streaming and Visualization Project:** Spearheaded the creation and deployment of an advanced data processing ecosystem, integrating Kafka and Confluent for robust data streaming, PySpark for sophisticated stream processing, and SQL and Python for intricate data analysis, complemented by Tableau for insightful real-time visualizations. Efficiently processed over 1TB of data daily, achieving a 40% enhancement in processing speed. Utilized Databricks for streamlined analytics and machine learning workflows, alongside AWS and Azure for scalable cloud infrastructure, ensuring a high-performance, cloud-optimized solution that improved decision-making efficiency by 30%