Hemachandrika Rage

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SUMMARY

Data Science Graduate student with hands-on experience in analytics, machine learning, and natural language processing (NLP). I created impactful reports using Power BI and SQL, supporting data-driven decisions in my previous company and Academic projects like sentiment analysis for British Airways and improved model accuracy for digit recognition with deep learning. Skilled in Python, SQL, and various visualization tools, I am passionate about leveraging data to solve real-world problems and drive business success.

SKILLS

Programming Languages – Python, SQL, R, MySQL, Pyspark, Juypter Notebook, VS Code, **Code Versioning** – GitHub **Visualization Tools** – Tableau , Power Bi , Matplotlib, Seaborn, Excel, Pivot Tables, VBA, PowerBI, Tableau, **Data Analysis & Modeling Techniques** – EDA, Logistic Regression, Supervised Learning, CNN, LDA, Data Cleaning, **Deep Learning Frameworks and Tools** – Keras, TensorFlow, Hypothesis Testing, Regression **Web Scrapping** – BeautifulSoup,**Natural Language Processing (NLP) Tools** – NLTK,VADER(Valence Aware Dictionary and sEntiment Reasoner),Latent Dirichlet Allocation

EXPERIENCE

Tata Consultancy Services, Bengaluru, Karnataka, India Dec 2021 – Dec 2022

BI Data Analyst

- Created reports to provide data that helps executives and business users make wise choices.
- I've worked with Power BI connections to a variety of data sources, such as SQL databases and other data platforms.
- Developed solutions utilizing specific basic knowledge for tasks, problems, and projects.
- Acquired fundamental understanding of specific work duties, industry norms, and procedures to assist in formulating recommendations that may be put into practice.

PROJECTS

Sentiment Analysis- Customer Feedback Analysis for British Airways

Python, Web Scrapping, NLTK, LDA Feb 2024-April 2024

- Handled a data-driven project for British Airways that analyzed consumer sentiment and extracted useful insights from a wide range of customer reviews obtained from airlinequality.com.
- Utilized Python for sentiment analysis, web scraping, and data preprocessing.
- Using visualization libraries, critical data were visually represented, providing clear insights
- Shown proficiency in data visualization, strategic communication, and natural language processing.

Neural Network-based Handwritten Digit Recognition

Python, Keras, TensorFlow, CNN Nov 2023 – Jan 2024

- I tackled the MNIST handwritten digit classification task throughout my project by combining deep learning architectures with conventional machine learning approaches.
- In the beginning, I used a multilayer perceptron (MLP) which is also a neural network, and on the test dataset, I achieved an impressive accuracy of over 96%.
- I switched to a CNN architecture with dropout regularization to improve model performance even further and investigate convolutional neural networks (CNNs), which produced even higher accuracy.
- By utilizing methods including data preparation, hyperparameter adjustment, and model assessment, I improved the CNN model to surpass 96.5% test accuracy.

Loan Approval Prediction using Machine Learning

Python, EDA, Logistic Regression, Supervised Learning Aug 2023 – Oct 2023

- Utilizing machine learning techniques, I led a Loan Prediction project that streamlined financial institutions' loan approval processes.
- I created a logistic regression model to forecast loan acceptance based on applicant data by utilizing supervised learning methods. Data cleansing, exploratory data analysis, feature engineering, model construction, and performance evaluation were among my duties.
- I performed thorough data analysis and visualization using Python tools to comprehend variable distributions and spot predictive trends. With careful examination of the precision-recall curve, ROC curve, accuracy score, and confusion matrix, I was able to obtain an accuracy of 84.87% on the validation dataset.

EDUCATION

Saint Peter's University, Jersey City, New Jersey
Master of Science in Data Science – CGPA 3.91*/4 May 2023 – Dec 2024

JNTUA College Of Engineering Ananthapur, Andhra Pradesh, India
Bachelor of Engineering (Mechanical Engineering) – CGPA 8.06/10 Jul 2016 – May 2020

CERTIFICATIONS

Snowflake - Hand-on Essentials Snowflake , SQL-SQL Essentials Training