Sri Charan Thoutam

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INTERNSHIPS

Data Science & GenAI Intern

Innomatics Research Labs

Sep 2024 – Dec 2024

- Conducted comprehensive **Exploratory Data Analysis (EDA)** to uncover trends, detect outliers, and analyze relationships within datasets.
- Developed **AI-powered solutions** leveraging Generative AI techniques to address real-world challenges.
- **Project Lead:** Led a 6-member team to develop GenAI-powered Discord bots for text and image generation. Successfully developed two bots:
  - **Boa:** A conversational text-generation bot utilizing LangChain, Google Gemini API, and ChromaDB for context-aware responses using RAG.
  - **Kiku:** An advanced bot enabling text extraction from images using PyTesseract and text-to-image generation using Stable Diffusion API.
- **Key Projects:**
  1. **Diamond Price Prediction with MLOps:** `Project Summary`
  2. **Electric Vehicle Data Analysis:** `Analysis Insights`
  3. **Boa AI:** `Project Overview`

EDUCATION

B.Tech in Computer Science and Engineering (AI & ML)

Ganapathy Engineering College

09/2021 - 07/2024 | CGPA: 7.01/10

Diploma in Electronics and Communication Engineering

VMR Polytechnic

05/2018 - 07/2021 | CGPA: 7.5/10

Board of Secondary Education SSC - Class X

ASSISI ENGLISH MEDIUM SCHOOL

04/2018 | CGPA: 8.3/10

SKILLS

1. **Programming Languages**: Python (Proficient), SQL, Bash
2. **Data Analysis**: Data Cleaning, Exploratory Data Analysis (EDA), Statistical Analysis, Hypothesis Testing, Data Visualization
3. **Machine Learning**: Supervised and Unsupervised Learning (Linear Regression, Logistic Regression, Decision Trees, Clustering, SVM)
4. **Data Visualization Tools**: Matplotlib, Seaborn, Plotly, Power BI
5. **Big Data and Processing**: pandas, NumPy, PySpark
6. **MLOps**: MLFlow, Docker, GitHub Actions, CI/CD Pipelines
7. **Databases**: MySQL, MongoDB
8. **Cloud Platforms**: AWS (EC2, ECR, S3)
9. **Feature Engineering**: Handling Missing Data, Outlier Detection, Dimensionality Reduction (PCA), Encoding Techniques
10. **Version Control**: Git, DVC
11. **Operating Systems**: Windows, Linux

PROJECTS

Diamond Price Prediction

Tech: Python, MLFlow, Flask, Docker, CI/CD, AWS

- Developed a machine learning model to predict diamond prices based on features like **carat, cut, color, clarity**.
- Used **AWS S3 Bucket** for dataset storage and retrieval.
- Conducted **Exploratory Data Analysis (EDA)**, including Univariate and Bivariate analysis, to understand relationships.
- **Automated MLOps pipeline** with stages for Data Ingestion, Validation, Transformation, Model Training, Evaluation and Prediction Pipeline for Model Serving using **Flask App**.
- Set up a **DAGsHub Registry** for MLFlow Experiment Tracking and Model Versioning.
- Deployed the app on **AWS EC2 via ECR** for production use.
- `CodeWithCharan/Diamond-Price-Prediction`

Data Analysis on Electric Vehicle

Tech: Python, pandas, matplotlib, seaborn, plotly

- Conducted **EDA** including **Univariate** and **Bivariate analysis** to extract insights from the EV dataset.
- Visualized the **distribution of EVs across U.S. states** using a **Choropleth Map** built with **Plotly**.
- Developed an animated **Racing Bar Chart** to showcase the dynamic trends in EV sales by manufacturer over time.
- Generated insights into **EV market trends** by leveraging advanced visualization techniques.
- `CodeWithCharan/DataAnalysis-on-Electric-Vehicle`

ACHIEVEMENTS

1. Earned **5 stars** in **Python** on HackerRank
2. Earned **5 stars** in **SQL** on HackerRank

ARTICLES & PUBLICATIONS

1. **Evolution of Language Representation Techniques: A Journey from BoW to GPT -** `Read Article`
2. **Hacking the System Design: How Search Engines Understand and Deliver Results -** `Read Article`

CERTIFICATES

1. **Python:** `HackerRank`
2. **SQL:** `HackerRank`
3. **Problem Solving:** `HackerRank`
4. **Machine Learning with Python:** `freecodecamp`
5. **Generative AI:** `Udemy`

LINKS

`leetcode.com/u/CodeWithCharan`
`hackerrank.com/CodeWithCharan`
`linktr.ee/CodeWithCharan`
`codewithcharan.github.io/My-Portfolio`