Sri Charan Thoutam

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INTERNSHIPS

Data Science & GenAI Intern

Innomatics Research Labs

Sep 2024 – Nov 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.
- Acquired hands-on experience with LangChain, Prompt Engineering, API Management, Vector Databases and Advanced RAG techniques.
- **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 via Hugging Face's Stable Diffusion API.
- **Diamond Price Prediction with MLOps:** `Link to project summary`
- **Electric Vehicle Data Analysis:** `Link to analysis insights`
- **Boa AI:** `Link to 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), Bash
2. **Generative AI**: LangChain, Hugging Face, OpenAI GPT API, Google Gemini API, Prompt Engineering, Fine-Tuning Models, VectorDB, RAG (Retrieval-Augmented Generation)
3. **Natural Language Processing (NLP)**: Text Generation, Sentiment Analysis, Summarization, OCR (PyTesseract), Embedding Models
4. **Multimodal AI**: Text-to-Image (Stable Diffusion, DALL·E), Image-to-Text (OCR)
5. **Frameworks**: PyTorch, TensorFlow, FastAPI, Flask, Streamlit, Scikit-learn
6. **MLOps**: Docker, GitHub Actions, MLFlow, CI/CD Pipelines
7. **Databases**: MySQL, MongoDB, ChromaDB
8. **Cloud**: AWS (EC2, ECR, S3)
9. **Version Control**: Git, DVC
10. **OS**: 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.
- Implemented an **automated MLOps pipeline** with stages for **Data Ingestion, Validation, Transformation, Model Training**, and **Evaluation**.
- Set up a **DAGsHub Registry** for **MLFlow Experiment Tracking** and **Model Versioning**.
- Built a **Prediction Pipeline** for Model Serving using **Flask App**.
- **Automated CI/CD pipeline** using **GitHub Actions**.
- Deployed the app on **AWS EC2 via ECR** for production use.
- `CodeWithCharan/Diamond-Price-Prediction`

Text Summarizer App

Tech: Python, NLP, Docker, CI/CD, AWS

- Developed a **Text Summarization App** that will summarize any **text**, **dialogue**, **conversation** or **article**.
- **MLOps pipeline:** Data Ingestion, Validation, Transformation, Model Training, and Evaluation.
- Automated **CI/CD** pipeline using **GitHub Actions** & **Docker**.
- Deployed the **Streamlit App** on **AWS EC2** via **ECR**.
- `CodeWithCharan/Text-Summarizer`

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`