DEEPANSHU MIGLANI

LinkedIn| deepanshumiglani0408@gmail.com | +91-8571980857 | GitHub

Education

UPES, Dehradun- India 2022- 2026
- CSE(AIML)| CGPA: 7.56

Siddhartha Public School, New Delhi - India 2021-2022
- CBSE (Class XII)

O.S.D.A.V. Public School, Kaithal- India 2019-2020
- CBSE (Class X)

Skills

- **Languages:** Python | HTML5 | CSS | Java | C++
- **Framework:** React | Node.js | Flask | Streamlit | Web Scraping (Beautifulsoup, Scrapy)
- **Database:** MySQL | MongoDB | SQLite
- **Machine Learning & NLP:** Large Language Models (LLMs) – LLaMA 3.1, BERT | Hugging Face Transformers

Key Projects

1. Design and Development of Home Essentials E-commerce website (During internship) **Link- Github**
This project involves developing an e-commerce platform using Flask to shop for home appliances. It includes features such as user authentication, product search, order management, and an admin portal for managing products and orders..
- **Key Features**: It provides secure user authentication, efficient product search functionality, streamlined order management, and a dedicated admin portal for easy product and order management.
- **Technologies Used:** HTML, CSS, JavaScript, Flask(Python), SQLite

2.HindGK : A Hindi Question-Answering System using LLM with Domain Classification **Link - Github**
Designed and fine-tuned a Hindi Question-Answering system using LLaMA 3.1, trained on a custom-translated and validated dataset of 5,000 General Knowledge QA pairs. Integrated a domain classification module using keyword detection, TF-IDF vectorisation, and K-Means clustering to improve contextual accuracy.
- **Key Features :** Fine-tuned LLM for Hindi QA, domain-aware answer classification, multilingual semantic evaluation (mBERT), and visualisation of model clusters and domain performance metrics.
- **Technologies:** Python, PyTorch, Hugging Face Transformers, TensorFlow, Scikit-learn, Google Colab, Matplotlib, Seaborn, TF-IDF, PCA, K-Means, mBERT

3.Indic Language Text Summarization using Deep Learning Based Approach **Link- Github**
This project explores Indic language text summarization using deep learning, implementing an LSTM-based encoder-decoder model while considering LLaMA 3.1 and BERT to address challenges like complex scripts and limited data in low-resource languages.
- **Key Features:** Deep learning-based summarization for multiple Indic languages, data augmentation for low-resource support, user-friendly Streamlit interface, improved accessibility for non-English speakers.
- **Technologies Used**: Python, PyTorch, Hugging Face Transformers, Streamlit, Pandas, and Joblib for deep learning and web app development

4. Indic Word Search Solver **Link- GitHub**
This project develops a word search solver for Indic scripts like Hindi and Kannada, supporting multiple word orientations and addressing challenges like complex characters, diacritics, and ligatures.
- **Key Features:** Dynamic grid generation, Indic language support, real-time user interaction with hints and scoring via JavaSwing GUI.
- **Technology Used:** Java with Swing, 2D arrays for grids, backtracking algorithm and Intellij IDE

5. Indic News Scraper **Link-Github**
This project scrapes Indic news articles using Scrapy, structures the data into a dataset, and includes a detailed report on its statistics and preparation process.
- **Key Features**: Automated web scraping using Scrapy to online indic news articles, categorisation of the dataset across multiple domains (Business, Sports, Health, etc.), and preparation of the dataset for further NLP applications
- **Technologies:** Python, Scrapy, JSON, Pandas, and NumPy for data processing.

Internship

- Internship on Python and Machine Learning at Bahash Private Limited **24/05/2024- 25/07/2024**
- Completed a social internship at Sirayki Pariwar, contributing to community welfare initiatives **1/06/2023 - 1/06/2023**

Responsibility

- **Organising committee member in HACKATHON 7.0, HACKATHON 8.0, and UHACKATHON 4.0, ICMLDE Conference.**
- **UPES CSI | Registration Head -** Managed participant registration and database maintenance for technical events, hackathon, ensuring efficient processes and data accuracy