SHWETA MAURYA

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Skills

Programming: Python, Java
Data Analysis and Vizualisation: NumPy, Pandas, SQL, Excel, Tableau
Machine Learning: Scikit-Learn, LLMs, Transformers, OpenAI
Deep Learning: PyTorch, Neural Networks, NLP
AI-Based Skills: LangChain, Agent-based Systems, RAG (Retrieval Augmented Generation), Prompt Engineering
Other Tools: Jupyter Notebooks, GitHub, AWS, Streamlit, BeautifulSoup4

Education

Thakur College of Engineering and Technology (TCET), India　　　　　　　　　　　**2022 - 2026**
- Computer Science and Engineering (Cybersecurity) | CGPA: **9.63/10.0**

Work Experience

Workik | Technical Writer Intern　　　　　　　　　　　　　　　　　　　　　　　**Sep'24 - Jan'25**
- Created **100+** SEO-optimized technical blogs and use cases using **GPT- 4**, boosting organic traffic by **30%** and enhancing user engagement.
- Utilized **prompt engineering** & **CMS** to simplify complex concepts, boosting visibility by **25%** and supporting **product management**.

Projects

KIRA: AI Tutor - MultiModal Learning Assistant | GitHub　　　　　　　　　　　**Feb'25**
*Built a smart AI tutor using **Flask** and Retrieval-Augmented Generation **(RAG)** powered by **Gemini API** and **LangChain**.*
- Integrated voice-enabled Q&A with speech_recognition, **pyttsx3**, and text generation.
- Developed a hybrid context engine using **FAISS**, **Ollama** embeddings, and web scraping (**BeautifulSoup**).
- Reduced hallucinations by **40%** via multi-agent orchestration with distinct roles for generation, retrieval, and verification.

Image Classifier | GitHub　　　　　　　　　　　　　　　　　　　　　　　　　**Dec'24**
*Developed a CNN-based deep learning pipeline in **PyTorch** using transfer learning with **VGG16** and **ResNet18**.*
- Applied robust data augmentation, dropout regularization, and hyperparameter tuning with GPU acceleration.
- Achieved an overall accuracy of **81%** with checkpointing and **normalization** based on **ImageNet** statistics.
- Built a CLI for training/inference that displays **top-K** predictions and maps indices to names via **JSON**.

Pluto.ai | GitHub　　　　　　　　　　　　　　　　　　　　　　　　　　　　**Dec'24**
*Built a responsive AI Chatbot using **Flask, Requests** and a space-themed frontend using **HTML, CSS, and JavaScript**.*
- Integrated **NLP** using **spaCy**, **NLTK**, and **Gemini API** (as fallback mechanism) for intelligent responses.
- Developed a dynamic chat interface with real-time messaging, authentication, and **SQLite** storage.
- Implemented tokenization and sentiment analysis for precise query understanding.

Generative AI with AWS | GitHub　　　　　　　　　　　　　　　　　　　　　　**Jul'24**
*Deployed and fine-tuned Meta's **Llama2** model on **AWS Sagemaker.***
- Evaluated and enhanced model performance in text generation and domain-specific tasks.
- Demonstrated expertise in deploying AI models for specialized knowledge tasks.

Certifications & Courses

- AI Programming with Python – Nanodegree (AWS & Udacity)
- Generative AI with AWS – Udacity
- Prompt Design in Vertex AI – Google
- Prompt Engineering – OpenAI & DeepLearning.AI

Research & Achievements

Blockchain Application for Traceability of Farm Produces | Link　　　　　　　　**Feb'23**
*Co-authored research paper on integrating **blockchain** technology into agricultural supply chain management.*
- Analyzed current challenges in agri-food supply chains, such as lack of **transparency**, **traceability**, and consumer **trust**.
- Awarded **Second Prize** for research presentation at the **EWPPC-2023 Conference** in Thakur College of Engineering & Technology