HEMA M
AI Django Develop

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PROFILE

Experienced Data Support Intern with nearly 1.2 years of expertise in data analysis, dedicated to extracting valuable business insights. Transitioning with a solid foundation in **Artificial Intelligence, Data Science, Machine Learning, Natural Language Processing, and Generative AI**. Committed to continuous learning and applying advanced data science techniques to drive business growth. Passionate about contributing innovative solutions to data science teams.

SKILLS

Python | Data Visualization | Machine Learning | Deep Learning | Django | PowerBI | SQL | MongoDB | LLM | Hugging Face | Groq | Openai | NLP | BeautifulSoup | RAG

PROFESSIONAL EXPERIENCE

Data Support Intern
GUVI Geek Network Pvt Ltd   **Feb 2024 – Present | Chennai**

Project Details:

Backend Development for AI Mock Interviewer (Feb 2025 – Present)
Developed a backend system for an AI-powered mock interviewer, evaluating candidates based on speech and textual responses.
Key responsibilities:
- Integrated real-time Speech-to-Text (STT) and Text-to-Speech (TTS) features.
- Designed an LLM-based evaluation system for scoring and feedback generation.
- Conducted unit and integration testing with pytest and unittest.
- Deployed using Hugging Face Spaces and Docker.

Tools & Technologies: Django**,** Python, OpenAI, STT, TTS, LLM, Pytest, Unittest, Streamlit, Docker.

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Backend Development for E-Learning Application (Nov 2024 – Jan 2025)
Contributed to an E-learning platform's backend, enhancing user engagement with features such as transcription, summarization, and AI-driven quiz generation.
- Extracted transcriptions from videos using OpenAI Whisper-1.
- Processed text and images using OpenCV.
- Built a dynamic quiz module adapting to user knowledge.
- Developed course-wide chatbots for instant support.

Tools & Technologies: Python, OpenAI Whisper-1, CV2, ChromaDB, OpenAI, Groq Model.

E-Learning Retrieval-Augmented Generation (RAG) Chatbot (Oct 2024 – Nov 2024)
Developed an advanced RAG chatbot for students by indexing video content and enabling efficient retrieval.
Converted video files to audio using MoviePy.
Transcribed audio with OpenAI Whisper-Large and stored data in ChromaDB.
Leveraged Groq Model Llama-3.1-70B-Versatile for contextual answers.

Tools & Technologies: MoviePy, OpenAI Whisper-Large, ChromaDB, LangChain, Python.

Thanglish Conversational Chatbot (July 2024 – Sept 2024)
Developed and deployed a Thanglish chatbot for mixed-language queries with real-time interaction.
- Fine-tuned a custom dataset and optimized for low latency.
- Integrated Gradio for user testing.

Tools & Technologies: Meta Llama 3.1-7B, Transformers, Gradio, Accelerate, Hugging Face.

Predictive Enrollment Model for E-Learning Institute (April 2024 – July 2024)
Built a machine learning model predicting student enrollment status based on form data.
- Combined semantic and categorical analysis for high-accuracy predictions.
- Used ensemble methods and feature selection techniques.

Tools & Technologies: XGBoost, BERT, RFE, Chi-Square Tests, Ensemble Methods, Python

PERSONAL PROJECTS
Expense Tracker Web App
- Developed a web-based Expense Tracker application using the Django framework.
- Created a user-friendly interface for adding and managing balance account expenses and income.
- Utilized Python, Django, HTML, CSS, JavaScript, and SQLite database.

E-commerce Website with Django
- Developed a fully functional e-commerce website using the Django framework.
- Implemented user authentication, product catalog.
- Utilized Python, Django, HTML, CSS, JavaScript, and MySQL Database.

EDUCATION
IIT-M Advanced Programming Professional & Master Data Science
IIT-M GUVI | July 2022 – Dec 2022 | Chennai
Master in Business Administration (MBA Systems & HR)
Thangavel Engineering College | Jun 2009 – Apr 2011 | Chennai
Bachelor of Computer Science
A.V.V.M Sri Pushpam College | Jun 2006 – Apr 2009 | Thanjavur

CERTIFICATIONS
Crash Course on Python – Coursera (Google Certified)
Introduction to AI – Simplilearn