Prathmesh Kangane

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Education

Bachelor of Engineering in Computer Science Engineering (AIML) June 2022 –May 2026

University of Mumbai, India

Technical Skills

Languages: Python, Java, SQL

Frameworks & Libraries:

- Backend: Django, Flask,RESTful API
- Frontend: Bootstrap,Streamlit
- ML/DL: TensorFlow, Keras, Scikit-learn, Librosa, SentenceTransformers

Databases: MySQL

Cloud & Deployment: IBM Cloud, AWS

Developer Tools: Git ,GitHub, VS Code, Google Colab, Jupyter Notebook

Experience

AI & Cloud Computing Intern — *Edunet Foundation* June 2024 – August 2024

In collaboration with IBM SkillsBuild & AICTE

- Developed and deployed AI models for precision agriculture using Python, TensorFlow, and IBM Cloud AutoAI, improving crop prediction efficiency.
- Capstone Project Crop Recommendation: Built a supervised ML model (via IBM Watsonx.ai AutoAI) trained on soil and environmental parameters (N, P, K, temperature, humidity, pH, rainfall), achieving ~90% accuracy in crop suggestions.
- Leveraged AutoAI for automated model selection and training, resulting in a LightGBM-based model deployed as an online prediction service, enabling real-time recommendations for 50+ test cases.

Projects

Research Paper Recommender| *Streamlit, TensorFlow, Sentence Transformers, LLMs*

- Built a research paper recommendation system using Sentence Transformers for semantic similarity and a deep learning classifier to predict subject areas, achieving Top-5 accuracy of 87% on ArXiv data.
- Developed an interactive Streamlit UI that accepts user input (title + abstract) and generates personalized paper suggestions with real-time domain predictions.
- Integrated cosine similarity retrieval with an MLP model, improving recommendation relevance by ~20% compared to baseline keyword matching.

Emotion Detection Support Bot| *Python, Librosa, TensorFlow, Streamlit*

- Designed a voice-based emotion recognition system using MFCC features and an LSTM model, achieving ~78% classification accuracy across multiple emotional states.
- Integrated a responsive support bot that provides emotion-aware replies, enhancing user interaction and empathy.
- Built a Streamlit interface supporting both real-time and file-based voice input, with waveform visualization and emotion-specific chatbot responses tested on 200+ audio samples.

Coursework

Database Management, Software Design, Data Structures, Statistics, Machine Learning,Deep learning