MANVI BAGHEL

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SUMMARY

Passionate and dedicated ML/AI enthusiast pursuing Masters in ML/AI. Equipped with a strong foundation in theoretical concepts, mathematics and hands-on experience in building machine learning models.Proven leadership and management skills, cultivated through a history of successful event management and team leadership roles. Committed to continual growth and contributing innovative solutions to the evolving field of machine learning.

TECHNICAL SKILLS

Languages and Developer Tools: Python, C++ , HTML , CSS , Javascript , SQL , VS Code
ML Models and Frameworks: CNNs , SVM, GMMs , k-Means , PCA , Tensorflow ,PyTorch, Scikit-learn , Pandas
Relevant Coursework: Machine Learning , Computer Vision and Deep Learning , Generative AI , Web Mining , Social Network Analysis , Theory of Computation, DBMS, Linear Algebra , Probability

KEY PROJECTS

Lung Sound Classification with Multi-Feature Integration Utilizing a Lightweight CNN Model   Aug 2024 – Dec 2024
Developed a CNN architecture with Squeeze-and-Excitation (SE) and dropout blocks for lung disease detection from audio signals
  • Integrated diverse audio features (MFCC, RMS, ZCR, wavelet coefficients, spectral centroid) for improved model performance
  • Achieved 92% test accuracy and F1 score of 0.92 on balanced 10-class audio datasets

Web Mining for Sustainability Communication in Tourism Websites (link)   Aug 2024 – Dec 2024
Conducted web mining to assess and rank tourism websites based on sustainability communication effectiveness
  • Developed a dictionary-based analysis framework with five key topics
  • Extracted and analyzed website content using BeautifulSoup and NLTK to evaluate communication trends
  • Developed a scoring mechanism to rank websites based on sustainability communication effectiveness

Topic Modelling using LDA (link)   Aug 2022 - Nov 2022
Prediction of the topic in a document by implementing and comparing results of Latent Dirichlet Allocation(LDA)
  • Used python libraries like sklearn, re, nltk, numpy, pandas on dataset including products' complaints from different companies
  • Optimized models to detect the topic of any given complaint, got the best results from LDA than NNMF and LSA as silhouette score of 0.78 and homogeneity score of 0.31

EXPERIENCE

IIIT Jabalpur, DBMS: Teaching Assistant   Aug 2024 - Dec 2024
  • Assisted students in understanding DBMS and evaluated them based on their performance in weekly labs

IIT Dharwad, Dharwad: Guided Research Project

AI/ML-oriented remote sensing for drought prediction in agriculture, : Prof Rahul Pandya   Aug 2022 – Nov 2022
  • Calculated and analyzed SPI over 3 and 6 months and performed Mann-Kendall Test to observe the trends in rainfall over years
  • Developed a Linear Regression model for drought Prediction using IMD rainfall data of Karnataka state from 1901-2021, Got r2 score of 0.74 and rmse of 0.14

IIT Dharwad, Dharwad: Frontend Developer   May 2022 – July 2022
  • Added few components to the website of the Coding Club of the Institute and fixed bugs using React.js

VOLUNTEER EXPERIENCE

EUNOIA , literary club , IITDh, : Secretary   May 2022 – April 2023
  • Organized college-wide literary events enhancing campus engagement.

EDUCATION AND ACHIEVEMENTS

M. Tech: Artificial Intelligence and Machine Learning   by 2026
IIIT Jabalpur , Jabalpur , Madhya Pradesh   8.3 GPA
B.Tech : Electrical Engineering   April 2024
IIT Dharwad , Dharwad , Karnataka   7.10 GPA
Bronze Medal   March 2021
Inter IIT Tech Meet , 9.0 , IIT Guwahati   ISRO's Web Based Visualization