MITHUN M S

Artificial Intelligence and Machine Learning Student

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SUMMARY

Third-year AI & ML student at Saveetha Engineering College with a strong foundation in Python and core AI/ML techniques (supervised/unsupervised learning, neural networks, regression, classification). Skilled in TensorFlow, PyTorch, pandas, NumPy, and Jupyter notebooks for deep learning and data analysis. Experienced with Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), NLP, and transformer models. Passionate about AI, actively working on projects to build practical skills, and eager to collaborate on innovative AI solutions.

PROJECTS

Power BI Dashboard for Sales Data Analysis
Duration: June 2024
- Designed an interactive Power BI dashboard for analyzing sales data from an e-commerce dataset.
- Created dynamic visualizations to track sales performance, customer demographics, and product trends.
- Enabled real-time data filtering and drill-down capabilities for actionable business insights.

Medical Chatbot Using LLaMA and OCR Integration
Duration: September 2024 – Present
- Developed a Flask-based chatbot integrating LLaMA 3.1 and Langchain-Chroma for extracting data from medical documents and providing detailed diagnoses.
- Leveraged the Meta LLaMA-3.1-70B model to offer accurate medical diagnoses based on input reports and answer patient queries..
- Implemented Retrieval-Augmented Generation (RAG) for enhanced user interactions and medical advice.

Handwritten Text to Digital Conversion Using Azure Vision
Duration: August 2024
- Worked on converting handwritten text into digital format using the Azure Vision.
- Implemented validation and spell-check mechanisms to ensure transcription accuracy.
- Focused on improving the user experience for document digitization in many applications.

Temperature Prediction Model
Duration: September 2024
- Built a temperature prediction model using machine learning with boosting and bagging models.
- Employed a stacked ensemble approach (LGBM, RandomForest, AdaBoost) with hyperparameter tuning, achieving an MAE of 0.303 (training) and 1.28 (testing).
- Enhanced weather forecasting for applications in agriculture and infrastructure planning.

Contextual Spell Correction using LLaMA Model
Duration: July 2024
- Developed a contextual spell correction system using the LLaMA model for Excel datasets.
- Focused on correcting errors in handwritten data extracted into Excel sheets.
- Applied advanced data manipulation techniques to refine and improve dataset quality.
- Enhanced the accuracy of handwritten text extraction and processing for large-scale datasets.
- Improved overall data consistency and reduced manual correction efforts.

INTERNSHIPS

Internship at WinVinaya InfoSystems India Private Limited
Duration: July 2024

- Contributed to AI/ML-based Digitization & Validation projects, enhancing the company's data processing capabilities.
- Spell Correction and Automation: Developed a solution to improve the accuracy and efficiency of text and table processing modules.
- experimented with natural language processing models transformer models and transfer learning models.
- Multi-Language Text Extraction from Images: Created robust methods for extracting text from images in multiple languages, improving the company's data extraction capabilities.
- Demonstrated exceptional skills in completing assignments on time, significantly enhancing internal processes.

Intern, AI and ML InternPe [29-April-2024] – [26-may-2024]

Worked on AI and machine learning projects, gaining hands-on experience with Python, TensorFlow, and data preprocessing. Assisted in developing and testing machine learning models to solve real-world problems. Collaborated with a team to implement and optimize algorithms for various applications. Enhanced skills in data analysis, model evaluation.

HACKATHON EXPERIENCES

Participation in IIT Shaastra's AIML Challenge 1 & 2

- Participated in IIT Shaastra's AIML Challenge 1 and 2.
- Gained extensive hands-on experience in machine learning and data science.
- Worked on practical AI and ML problems, improving skills in model building, evaluation, and optimization,Hyperparameter Tuning,feature engineering.
- Developed a deeper understanding of real-world applications and challenges in AI and data science.

Participation in SRMIST Datathon

- Participated in the SRMIST Datathon and gained valuable knowledge about Large Language Models (LLMs) and Retrieval-Augmented Generation (RAGs).
- Worked on a hands-on project involving the development of a chatbot using the LLaMA model.
- Enhanced understanding of LLM integration for real-world applications and RAG frameworks for efficient information retrieval and generation.

EDUCATION

SCHOOLING
I had Compled My schooling (Hsc) at **VIDHYA GIRI HR.SEC SCHOOL**(2022) Karaikudi-
630001 **89.5%**
UG DEGREE
im currently pursuing my UG degree in **BTECH AIML** at **SAVEETHA ENGINEERING
COLLEGE(2022-2026)** saveetha nagar,thandalam,chennai

ADDITIONAL INFORMATION

Skills

- Data Engineering and Data Preprocessing
- Data Science and Data visualization
- Api Integration(Azure)
- Machine Learning and NLP's
- Deep Learning and Neural Networks
- Pytorch,Tensorflow,sklearn
- Large language Models and RAG
- Transformer models and Vector Database

Expertise

- Creativity
- Critical Thinking
- Leadership
- Problem Solving