Reddi Mohana krishna

M.Tech (Artificial Intelligence)
Dept.of CSE
National Institute of Technology, Silchar

+91-9100307659
mkreddi001@gmail.com
linkedin.com/in/mkreddi001
github.com/mohanreddy91

Summary

M.Tech AI student at NIT Silchar with research and internship experience at Bosch, focusing on LLM-based chatbots for large tabular data. Skilled in Machine Learning, Deep Learning, NLP, and Generative AI, with expertise in LLMs, RAG, Agentic AI, and tools like Python, LangChain, and PyTorch.

Education

- **National Institute of Technology, Silchar** — *Silchar, Assam*
  M.Tech in Artificial Intelligence - ***CGPA - 9.0*** — 2023 – 2025
- **TPIST (JNTU Kakinada)** — *Bobbili, Andhra Prasesh*
  B.Tech in Computer Science and Engineering - ***CGPA - 6.58*** — 2017 – 2021
- **Vidwan Junior College** — *Bobbili, Andhra Pradesh*
  Intermediate(PCM) - ***Percentage - 97.1*** — 2015 – 2017
- **Z.P.H School Gadelavalasa** — *Bobbili,Andhra Pradesh*
  10th(SSC) - ***CGPA - 9.0*** — 2010 – 2015

Experience

AI Institute, University of South Carolina (AIISC) — *Feb 2025 – Present*
Research Intern — Columbia, USA (Remote, Part-Time)

- Conducting research under Dr. Amitava Das on competitive alignment in large language models (LLMs).
- Exploring techniques to enhance model robustness, fairness, and ethical considerations in AI alignment.

Bosch Global Software Technologies — *Sep 2024 – Present*
Internship — Bengaluru, India

- Built an LLM-powered chatbot for real-time Q&A on large datasets using 'unSQLv1-7b-sqlite-lora' and Meta LLaMA 3.2 1B Instruct.
- Utilized Hugging Face Transformers, SQLAlchemy, SQLite, and Streamlit for development and deployment.

Projects

- **LLM-Based DataFrame Agent for Automated Data Manipulation and Visualization** — *Jan 2025*
  Tools: Python, Pandas, Hugging Face, SmolAgents,Transformers,LLMs
  - Built an LLM-based agent to perform DataFrame operations and generate visualization code from user prompts.
  - Designed to assist in dataset preprocessing, data manipulation, and automated plot generation for streamlined analysis.

- **AI Generated text detection** — *Dec 2024*
  Tools: Python,NLTK,Pandas,pytorch,LLMs,Hugging Face,Sentence Transformers
  - Developed an AI tool to detect machine-generated text using linguistic features and advanced NLP techniques and
  - Achieved 98.85% accuracy with a proposed hybrid deep learning model on the HC3 dataset of human and AI-generated text.

- **LLM-based Chatbot With RAG** — *Oct 2024*
  Tools: Python, Streamlit, LangChain, Chroma, ChatCohere, Cohere API, LangGraph, RAG, Vector Databases
  - Developed an LLM-based chatbot with Streamlit, using LangChain, 'ChatCohere', and Cohere's embeddings for conversation and semantic search.

Skills

- **Programming Languages**: C/C++, Python
- **Libraries & Frameworks**: Scikit Learn, PyTorch, Transformers, Langchain, Chroma
- **Packages**: NumPy, Pandas, matplotlib, NLTK, spaCy
- **Deep Learning**: CNN, RNN, LSTM, Transformer models, GANs,Diffusion Models.
- **Tools**:Git/GitHub, VS Code, Jupyter, Hugging Face
- **Miscellaneous**:Natural Language Processing(NLP),Supervised Learning, Unsupervised learning Data Structures & Algorithms, LLMs, RAG, Vector Databases, Agents.
- **Course Work**: Deep Learning, Machine Learning, Image Processing, NLP, Artificial Intelligence, Data Science, Machine Translation, Data Analytics,

Research Papers/Publications

Automatic Detection of AI-Generated Text from LLMs Using Feature-Driven Transformer Networks

Accepted for presentation at HCI 2025 Conference (Camera-ready submission in progress)

- Proposed a hybrid deep learning model for detecting AI-generated text with 98.85% accuracy on the HC3 dataset. Focused on data preprocessing, model development, and experimental validation.

Findings of WMT 2024 Shared Task on Low-Resource Indic Languages Translation

Accepted for presentation at EMNLP 2024, Ninth Conference on Machine Translation (WMT24)

- Presented results on machine translation models for low-resource Indic language pairs: English–Assamese, English–Mizo, English–Khasi, and English–Manipuri, utilizing the IndicNE-Corp1.0 dataset.
- Evaluation was performed using automatic metrics (BLEU, TER, RIBES, METEOR, ChrF) and human assessment.

Leveraging DistilBERT and XLM-RoBERTa for AI-Generated Text Detection

COLING 2025, GenAI Detection Task 2, 18th Rank Worldwide

- Achieved 18th place (accuracy 0.77) in English sub-task and 20th place (accuracy 0.59) in Arabic sub-task.
- Utilized DistilBERT and XLM-RoBERTa for AI-generated text detection with a Recall score of 0.825.

Certifications

- **Udemy**, NLP - Natural Language Processing with Python
- **Deep Learning.ai (Coursera)**, Machine Learning Specialization
- **CS50 (Harvard University)**, Introduction Programming with Python
- **Graduate Aptitude Test in Engineering (GATE)**, Computer Science

Positions of Responsibility

- **Technical Member,** NINTH CONFERENCE ON MACHINE TRANSLATION (WMT24) *August 2024*
- **NSS Volunteer,** National Service Scheme, TPIST *October 2019*