Belum Naveen kumar Reddy

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Education

Indian Institute of Technology, Bhubaneswar GPA: 8.03
B.Tech - Mechanical Engineering *October 2022 - present*
Sri chaitanya junior college Percentage: 97.5%
Senior School Certificate Examination, STATE *June 2020- May 2022*
Sri chaitanya Percentage: 100%
Secondary - SSC *June 2016- May 2020*

Experience

Pediaverse(EdTech) *May 2025-present*

- Spearheaded the development of an AI-powered activity recommendation engine for student skill upliftment, integrating personalized learning journeys based on user interests, domain proficiency, and mood context. Implemented a Retrieval-Augmented Generation (RAG) pipeline using FAISS and custom prompts to dynamically generate AI activities aligned with design, tech, business, and marketing domains. Collaborated with cross-functional teams to build a scalable backend using n8n, MySQL, and OpenAI/Groq APIs, enabling smart content generation, mentorship routing, and gamification features for over 100 users.

Projects

Fake News Detection *Project Domain*

- Developed an end-to-end Fake News Detection web application using Python, Scikit-learn, and Streamlit. Implemented text preprocessing techniques such as stop word removal, lemmatization, and TF-IDF vectorization to prepare data for a logistic Regression,Random Forest Classifier and LSTM achieving accurate binary classification of news as real or fake for Random Forest Classifier. Built an interactive Streamlit interface that allows users to input news content and receive predictions with probability scores. The project includes sample news cases, model evaluation, and a complete deployment-ready structure with a requirements.txt file, demonstrating practical skills in NLP, ML deployment, and user-centric design.

RAG-Based Conversational AI for Understanding Academic PDFs *Project Domain*

- Developed an AI-powered RAG (Retrieval-Augmented Generation) Chatbot called EduMedBot using Streamlit, LangChain, FAISS, and Groq's LLaMA/Mixtral models, designed to help students understand complex PDFs such as class notes, research papers, and medical reports. Integrated Cohere's free API for real-time text embeddings and Groq's LLMs for natural language answers, enabling users to ask questions conversationally and receive either precise answers or direct PDF text matches. Built a realistic chat interface with memory, context-aware responses, and dynamic chunk retrieval using FAISS, achieving a user experience similar to ChatGPT. Focused on performance, cost-efficiency (using free APIs), and deploying a fully functional demo on Streamlit Cloud for real-world testing and portfolio demonstration.

Key Skills

- **Programming Languages:** Python, C, C++
- **Machine Learning and Deep Learning:** Scikit-learn, TensorFlow, PyTorch, Transformers, LSTM, BERT, RNN, Transfer Learning
- **Natural Language Processing:** Text Classification, TF-IDF, RAG, LangChain, FAISS, Cohere API, Groq LLMs
- **Tools and Frameworks:** Streamlit, Git, Render, OpenCV, Docker
- **Web and Design:** HTML, CSS, Java Script,Adobe Photoshop, Illustrator
- **Soft Skills:** Communication, Problem Solving, Teamwork, Time Management

Position of Responsibility

E-summit, IIT Bhubaneswar

Core Team (Feb 2023 - March 2024)

- Worked as a core team of the Web and Design team from 2023-2024.

Associate (December 2022 - Feb 2023)

- Worked as a Associate of Web and Design team from 2023-2024.

Extra-Curricular Activities

- Member in NSO and player in volleyball team.