Ravi Chandera

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EDUCATION

- **Indian Institute of Technology(IIT) Patna** Patna, Bihar
  MTech in Artificial Intelligence. **CPI: 8.51** *July 2022 - June 2024*

PROJECTS

- **Med Bot | NLP** [Documentation]

  - Creation of a web application for a medical chatbot, utilizing **miniLM L6** for medical-specific embeddings and **llama v2** for inferencing.

  - Implemented a robust methodology, including knowledge base creation, retrieval-based QA model, and seamless integration into a chatbot framework using **Chainlit.**

- **LLM Science Exam | Kaggle Competition** [Documentation]

  - Used **Transformer** based model to answer science questions generated by **GPT-3.5**, generating questions from Wikipedia snippets

  - Implemented **QLoRA** technique to fine-tune a deBERTa model, enhanced score by approx **40% on MAP@3** evaluation metric

  - Created experimental dataset using **llama-2** and used it for **reward modelling**.

- **RESTful API To Check Text Similarity | NLP and software** [Documentation]

  - Built a **Flask** API for text similarity check and can be deployed using **docker**

  - Used **MiniLM-L6-v2** a transformer-based model to find out the similarity of the text

MTECH RESEARCH WORK

Fusion of real-time multi-modal disaster data [Documentation]

- Big data framework of **Kafka** to handle real-time data and **Apache airflow** for orchestration of data pipelines

- Built an open benchmark multimodal datasets related to large scale disasters for facilitating different information extraction tasks, information retrieval and information filtering tasks

- Stored refined data into **MongoDB.** Used graph neural networks(GNN) to create graph embeddings. Used **Astra DB** to store embeddings and feed them as input to the LLM model.

SKILLS/RELEVANT COURSEWORK

- **Skills:** Python | Tensorflow(keras) | PyTorch | Azure | Docker | Kafka | PySpark | GIT | MongoDB | Flask | Langchain

- **Courses:** Artificial Intelligence | Machine learning | Deep learning | Natural Language Processing | Big data | Cloud computing and Edge ML | statistics and probability | Optimization and linear algebra