Task 3 - ResearchBot: Computer Science Paper Assistant

**Author: Rosa Mystica M**

# 1. Introduction

This project is Task 3 of the internship, extending the ideas from Task 1 and Task 2. It introduces 'ResearchBot', an interactive chatbot that allows users to search, view, and understand abstracts of computer science research papers. The app uses Hugging Face's LLM to summarize and explain research content.

# 2. Key Features

• User can search for papers using a keyword (e.g., 'java').

• Top relevant paper titles are listed.

• Selecting a paper shows its abstract and LLM-generated explanation.

• User can rate the helpfulness of the answer using a slider (1-5).

• Data is saved to a CSV file for analytics.

# 3. Similarities with Task 1 & 2

• Uses LLM for generating human-friendly responses.

• Slider for user rating is retained.

• Analytics dashboard shows user satisfaction and question stats.

• Consistent UI design with sidebar navigation.

# 4. Technologies Used

• Python

• Streamlit

• Pandas

• Hugging Face Inference API (BART model)

• dotenv for environment variable management

# 5. File Structure

• main\_app.py – Streamlit interface

• llm\_api.py – Handles LLM requests

• analytics.py – Logging and rating storage

• search\_papers.py – Searches local CSV paper database

• .env – Stores Hugging Face token securely

• data/log.csv – Stores interaction logs

# 6. Conclusion

ResearchBot provides an intuitive interface for exploring research papers using AI. The project is aligned closely with the structure and goals of Task 1 and Task 2, ensuring consistency while adding new capabilities like real paper search.



