Task #1 Summarizer

The assignment is to write a 20-page Summary from the book "Crime and Punishment" in brief.

I've made several attempts to generate a summary spanning 20 pages from the book. However, due to the significant token size, I haven't been successful. Even after trying GPT-3.4, I faced the same issue. Therefore, I've developed a code that provides me with summaries for individual pages.

Initially, I imported the necessary libraries to process text, retrieve information using RAG, and interact with the OPENAI model.

The code loaded the book's text from a PDF file. After that, it divided the text into smaller chunks for processing. I have used the OpenAI embedding model to convert text format into numeric format, which facilitates computer comprehension and analysis, and stored it in a vector database using FAISS.

It then configured a system to retrieve data from the text in response to queries. This system consisted of a large language model (GPT-3.4-turbo) that was a pre-trained model on a large amount of textual data, a text representation retrieval, and a template that generated prompts for the user to interact with the model.

A RetrievalQA chain is constructed using the configured AI model, retrieval system, prompt template, and conversation buffer memory. The chain is to set up to handle user queries and generate responses based on the defined prompt template and context.

Eventually, it is executed into a loop where it asks the user for input, uses the system to process it, and then responds. This system generated the response by utilizing the user's input and the context of the Book "Crime and Punishment". Until the user chooses to stop, this procedure keeps going.

Task# 2 Prompt Template

The assignment was to write a detailed prompt template from a CSV file that includes students' study plans.

I have divided the prompt into 3 parts, the first part was to design a study plan based on learning style, performance analysis, study hours, and subjects. The second part was designed about the goals and activities of every student, third part was designed to continue evaluation and student progress daily.

To test the prompt whether is working well or not, I have developed a chatbot using RAG.

In this chatbot, I have imported all necessary libraries to process CSV files, retrieve information using RAG, convert text format into the multidimensional vector using the OPENAI Embedding Model, and store data into a vector database using chroma, used a large language model (GPT-3.4-turbo) a pre-trained model. In the end, I have executed a RetrievalQA chain is to set up to handle user queries and generate responses based on the defined prompt template, context and questions.