Final Project
AIPI 531 F23
Deadline: 12/14/2023

Objectives:
1.Teach LLMs for recommending items via prompt engineering.
2.Compare the item recommendation performance, LLMs vs a simple baseline recommender.

Requirements:
Follow the prompt engineering approaches mentioned in https://arxiv.org/pdf/2304.03153.pdf. You don't need to follow exactly the approaches in the reference. Feel free to make any improvements that you can think of.

Compare your LLM recommendation performance with a simple baseline recommender, e.g., the most popular, etc., based on any offline metrics.

If you completed the requirements mentioned above, you will get 30%. For the remaining 10%, it will depend on 1.how many prompt engineering approaches that you can try and include in the project. 2.how good your LLM is for recommendation, 3.the rigorousness of the experiments that you have run, 4.the creativity and completeness of the project.

For your GitHub repo, please include a readme consisting of 1.an overview of your project, 2.how to reproduce the results and how to run the code, 3.a brief summary of your findings. Please also organize your repo. It's up to you how to organize the repo. If you did those things, you will get the 10% for managing GitHub repo. **Deliverable/submission:** a link to GitHub repo.

Datasets:
MovieLens_100K. Also, feel free to consider any other datasets for item recommendations.

References and tools:
1.Hugging Face open source LLMs: https://huggingface.co/blog/llama2
2.OpenAI LLMs: https://openai.com/chatgpt
3.Prompt Engineering: https://www.promptingguide.ai
4.RAG: https://arxiv.org/pdf/2005.11401.pdf
5.Langchain: https://python.langchain.com/docs/get_started/introduction
6.Different ideas for applying LLMs for product recommendations (without fine-tuning):
https://arxiv.org/pdf/2303.14524.pdf
https://arxiv.org/pdf/2305.02182.pdf
https://arxiv.org/pdf/2304.10149.pdf

Troubleshooting:
Please contact TA if you have any questions or issues installing the packages. You need to do the work, but TA may help you resolve the packages' installation issues.