DRUG RECOMMENDATION SYSTEM PROJECT

Motivation: to further solidify the fundamentals of Python through web scraping and EDA as well as develop skills in analytics/story telling by building dashboards. Through the process, I hope to learn how to efficiently write Python code, understand the process of unit testing and development in general.

Why a Drug recommendation system

When you go to the pharmacy and ask for medicines that your doctor has prescribed for simple health problems like a runny nose, headache, or body ache it's inconvenient if the pharmacy don't have the same medication you've been prescribed. It's often a hassle to then reach out to your doctor for alternatives, so it would be useful to have a system that can look at the drug components of a few other medicines that could help resolve these minor issues.

WebMD's database has authentic content for the drug components of several medicines as well as medical news. Each medicine has reviews which can be used to visualizations out of.

Plan

Project subtasks:

- Web scraping
- EDA
- Data visualization

Do research on each subtask

Build subtasks, one step at a time

Put subtasks together

Duration: 3 weeks – 4 weeks (checkpoint: 1 day per week for the first 2-3 weeks and 2 days per week for the last week)

Documentation/Communication

GitHub Repo containing code, documentation, and dashboards

Action – first week

- Search WebMD for drugs recommended for 4 different health problems:
  - Runny nose
  - Headache
  - Backache
  - Cough
- Extract **key info**:
  - Drug components of recommended drugs

- o   Reviews for each drug
- o   Find alternatives to each drug + reviews
- Use cosine similarity between drugs or similar drug components to build recommendations
- Use **streamlit** to build the system