CS 556: Homework Set 2

Collaboration Policy: Homeworks will be done individually: each student must hand in their own answers. Use of partial or entire solutions obtained from others or online is strictly prohibited.

Late Policy: No late submissions will be allowed without consent from the instructor. If urgent or unusual circumstances prohibit you from submitting a homework assignment in time, please e-mail Professor or TAs explaining the situation.

Submission Format: Complete this jupyter notebook to successfully implement recommender systems on the Movie Lens Dataset. Follow this link to convert your **executed** notebook and submit in the form of html file. (We will need you to fill in all the required cells, run the cell to get the required output, and then convert the notebook to a HTML file). Submit both the .ipynb file and the html file.

Objective of the assignment: Build a recommender system using the MovieLens Dataset

We have outlined the major steps involved to help you achieve the goal of building your own recommender system. Given a name of the movie, your model should output the top 5 movies similar to that particular movie.

1. Import all the required libraries
2. Read the dataset
3. Create a rating matrix
4. Normalise this rating matrix
5. Compute SVD of this normalized rating matrix
6. Compute Cosine similarity (a function that computes the similarity between two movies)
7. Based on cosine similarity, sort the movies which are most similar and return the top 5 that match a given movie title.

How to access/ open .ipynb files: Use Colab by google. Follow the steps if you have never used colab before.

1. Download the given .ipynb file from the assignments section
2. Upload this file to your google drive
3. Click on the file and open it with colab.