**Project Description**

Here we will implement the collaborative filtering algorithm and apply it to a dataset containing movie ratings.

* Implementing the user-user collaborative filtering algorithm for making the predictions.
* The dataset we will be using is a small subset of the movie ratings data from the Netflix Prize.
* The dataset description file further describes the dataset.
* The paper “Empirical Analysis of Predictive Algorithms for Collaborative Filtering” <https://arxiv.org/ftp/arxiv/papers/1301/1301.7363.pdf> is a good reference as well.
* **Predicted Score:** We are interested in whether the system would recommend a movie (that the user has not already reviewed) to a user or not. Specifically, the input given is a user-id, movie-id, and the system need to compute the predicted rating for that user-id w.r.t the input movie-id and print out the predicted rating. Note that, for computing the predicted rating, the system can consider all those users in the dataset who have rated at least K movies in common with the input user as a neighbor for the input user. (the system can choose a reasonable K)
* **Recommendation:** Given a user-id and a year-of-release, recommend a movie for that user for that year-of-release. Specifically, rank all the predicted scores for the users on all the movies released in that year that the user has not yet reviewed, and pick the top scored movie.