

Homework 5

NOTE: My values are based on the ratings_small.csv dataset.

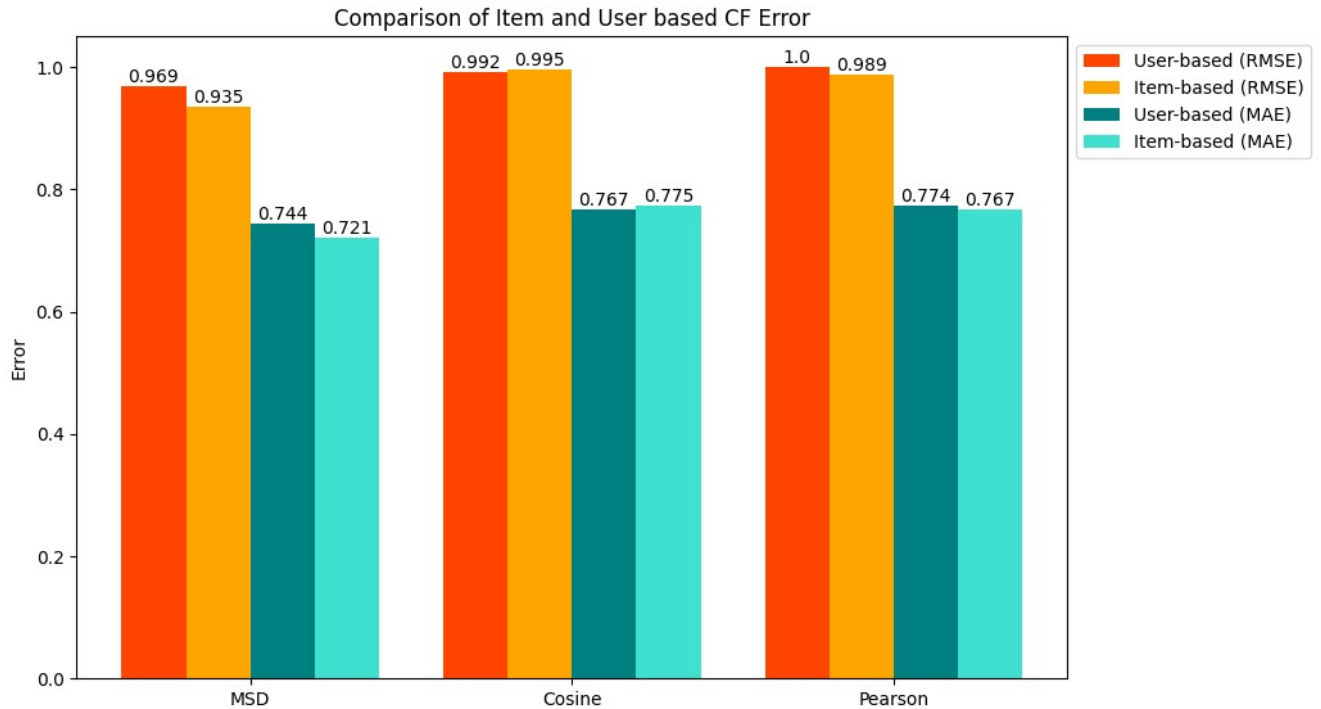
Question 3

c. The average MAE and RMSE for PMF, User-based CF, and Item-based CF are as follows:

	MAE	RMSE
PMF	0.69075	0.89628
User-based CF	0.74333	0.96726
Item-based CF	0.72104	0.93509

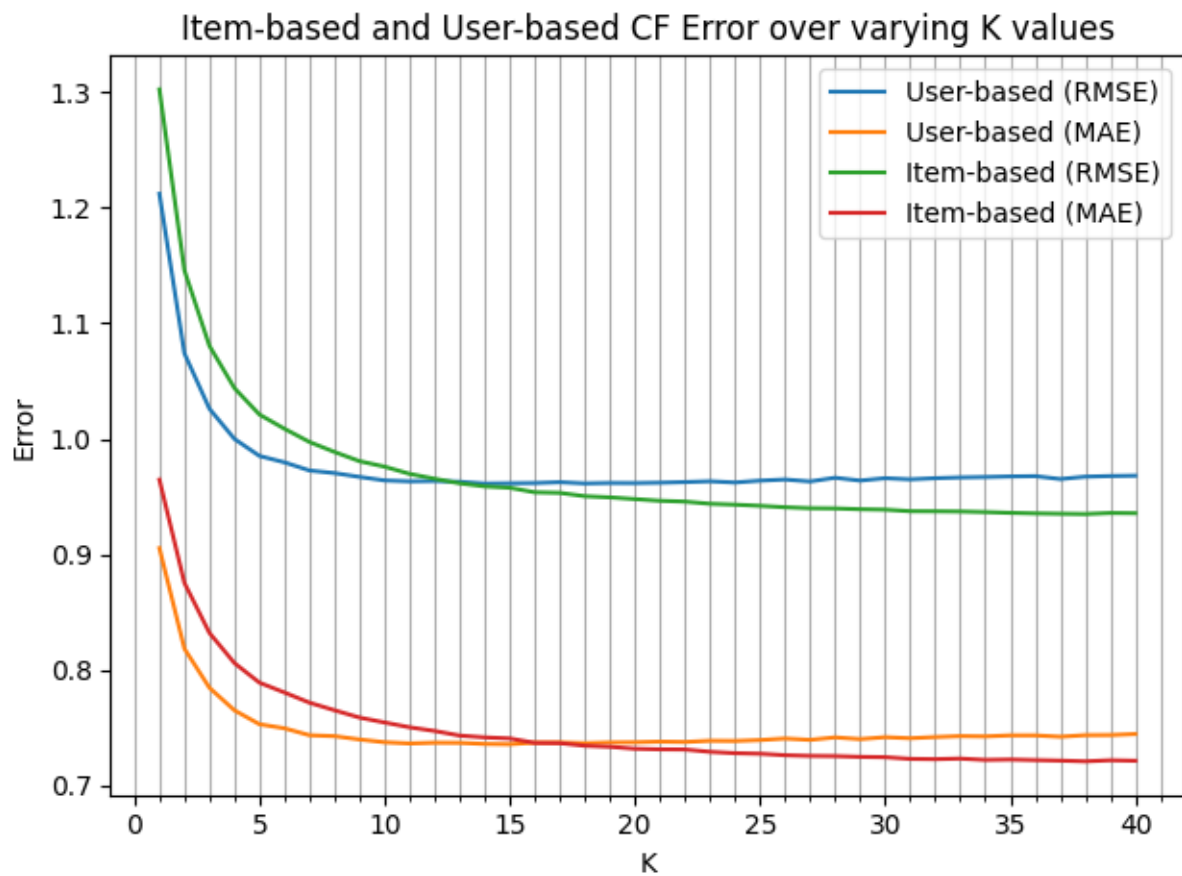
d. PMF has the lowest of both error metrics, making it the best model.

e.



For Pearson and MSD metrics, item-based CF has lower values for both error metrics. However, for Cosine, item-based CF is higher than user-based CF for both error metrics.

f.



g. The minimum K for User-based CF in terms of RMSE is 12. The minimum K for Item-based CF in terms of RMSE is 37.

The best K for User-based CF is not the same K as for Item-based CF.

Additional Questions

I spent around 10 hours on this assignment.

The most challenging aspect of this assignment was deal with matplotlib and getting it to display the graphs correctly.

I liked that this helped me to understand recommender systems better.