

Download the Movielens dataset 1 (the 100K dataset) from <http://www.grouplens.org/node/73>

Build a simple user-based and item-based recommender system (papers have been provided).

The dataset will have available and missing ratings. For evaluation you should use 5 fold cross validation. In each run, use 4 parts for training and the remaining 1 part for testing. Use the training set to predict the ratings of the test set.

To test how good or bad your recommender system is, you should compute the Mean Absolute Error (MAE) on the test set.

For measuring similarity you should use the **Cosine Similarity**

Report how the MAE changes when the number of users 'K' varies (K = 10, 20, 30, 40, 50) for each similarity measure.

- 10 marks