

# Recommendation\_system

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Here we run a collaborative filtering algorithm on a dataset of movie ratings. This dataset consists of ratings on a scale of 1 to 5. The dataset has 943 users and 1682 movies. We have used 200 users and 500 movies for training. Details of the dataset and the implemented algorithm and benchmarks can be found in Section 2 of Ex8.pdf.

```
[1]: import Recommender_system_1
```

Cost obtained for the regulation parameter  $\lambda = 1.500000$  is 31.344056

Gradient checking has been performed in Recommender\_system\_gradchk.py. The training has been performed in Recommender\_system\_2.py. Finally, the trained model has been used to recommend new movies for the first user in the dataset in Recommender\_system\_predictor.py.

```
[2]: import Recommender_system_predictor
```

The top recommendations for the first user, for movies not rated by him/her in the original dataset are

273 Heat (1995)

276 Leaving Las Vegas (1995)

290 Fierce Creatures (1997)

317 In the Name of the Father (1993)

327 Cop Land (1997)

346 Jackie Brown (1997)

475 Trainspotting (1996)

482 Some Like It Hot (1959)

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[ ]:
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