CMPE 211 - Data Structures and Algorithms

Project - Recommender Systems From Scratch

Due Date: Jan 02, 2018, 17.00

Necessary steps for building a recommender system are explained in the course. You can find the corresponding material at `https://github.com/uzay00/CMPE211`. Based on our discussions, implement a recommender system from scratch with Java. This is a group project. Each group can be composed of at most 5 students. Choose appropriate data structures and implement them yourself. Do not use, Java Collection api. If your program does not compile, your grade will be 0. If you choose a wrong data structure, your grade will be halved. Write your program with comments to indicate that you understand your programs. Write a short report to describe your decisions for the implementation this project. Compress your java files with your report and upload them through SIS. Students will be called upon for a short presentation at jan 09, 2018. Exact time will be indicated soon.

Part 0 Data

2P Load MovieLens Data to a nested symbol table.

Part 1 User-based recommendation

1P write the *dist()* function

1P write the *intersection()* function

1P write the *sim_distance()* function

2P write the *topMatches()* function

2P write the *getRecommendations()* function

Part 2 Item-based recommendation

1P write the *transformPrefs()* function

1P apply Part 1 function to transformed data.

2P write the *calculateSimilarItems()* function

2P write the *getRecommendedItems()* function and apply to movielens data

Bonus Discuss possible research directions based on this recommender system. You may get extra points for your creative thinking for the discussion part of our course.