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.

Choose an appropriate data structure. If your program does not compile or you choose a totally wrong data structure, your grade will be 0. Write your program with comments to indicate that you understand your program well. Compress and upload your java files through SIS. Students will be called upon for a short presentation at jan 04, 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.