Topic: Recommendation Engine

Q) Build a recommender system with the given data using UBCF.

Description of the data

In this dataset have users on the rows rated the jokes in the columns. The dataset comprises two csv files, Jokes.csv and Rating.csv is formatted as an excel file. The Jokes file consist of joke_id and Jokes & Rating.csv has the ratings given by the users to the jokes. Each rating is from (-10.00 to +10.00) and 99

corresponds to a null rating (user did not rate that joke). Note that the ratings are real values ranging from -10.00 to +10.00.

	id	user_id	joke_id	Rating
1	31030_110	31030	110	2.750
2	16144_109	16144	109	5.094
3	23098_6	23098	6	-6.438
4	14273_86	14273	86	4.406
5	18419_134	18419	134	9.375
6	5782_14	5782	14	-1.781
7	34059_62	34059	62	6.250
8	1159_9	1159	9	-2.906
9	17736_32	17736	32	-5.750
10	22626_22	22626	22	1.656
11	6610_96	6610	96	1.656
12	18725_13	18725	13	0.688
13	23340_130	23340	130	1.312

Hints:

1. Business Problem

    1.1. Objective
    1.2. Constraints (if any)

2. Data Pre-processing

    2.1 Data cleaning, Feature Engineering, EDA etc.

3. Model Building

    3.1 Partition the dataset
    3.2 Model(s) - Reasons to choose any algorithm
    3.3 Model(s) Improvement steps
    3.4 Model Evaluation
    3.5 Python and R codes

4. Deployment

    4.1 Deploy solutions using R shiny and Python Flask.

5. Result Share the benefits/impact of the solution - how or in what way the business (client) gets benefit from the solution provided.

Note:

1. For each assignment the solution should be submitted in the format

2. Research and Perform all possible steps for improving the model(s) recommendations

3. All the codes (executable programs) are running without errors

4. Documentation of the module should be submitted along with R & Python codes, elaborating on every step mentioned here