Assignment 2 Part 1

Friend Recommendation using Mutual Friends

Algorithm description:

1. Identify Possible Friends: For every user in the dataset, search for possible friends by looking at the friends of their existing friends. Exclude the user's current friends and the user themselves from this list.
2. Focus on Target Users: Narrow down the process to the 10 target users for whom friend recommendations are needed.
3. Count Shared Friends: For each target user, calculate the number of mutual friends they have with their potential friends.
4. Combine Potential Friend Data: Gather the mutual friend counts for each target user and their possible friends into a unified list.
5. Rank and Choose Top 10: Sort the potential friends for each target user by the mutual friend count in descending order and select the top 10.
6. Present Recommendations: Display the final results in an organized manner.

Output:

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UserID  Friend Recommendations
7       12343, 16539, 40423, 1, 10, 11, 12, 10287, 10469, 12344
58      72, 1, 10, 11, 12, 10782, 10841, 11192, 11599, 12663
569     4839, 7651, 13411, 579, 7611, 10459, 10469, 12715, 22199, 10407
1001    439, 1100, 3895, 442, 13829, 18163, 10240, 11045, 13835, 20598
5891    5883, 46410, 46438, 21100, 21859, 46341, 46377, 46380, 46386, 46390
7498    1250, 5144, 7280, 7296, 7458, 7459, 7460, 7461, 7462, 7463
24167   9774, 24140, 10176, 10333, 10500, 10531, 10532, 10723, 10801, 11066
32491   15175, 16862, 16878, 17740, 23550, 25199, 34185, 35605, 35630, 35692
42165   42152, 42154, 42160, 42167, 42170, 42171, 42172, 42179, 10661, 14327
48651   11234, 31463, 11162, 11245, 9106, 10753, 28354, 44454, 10413, 11697
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