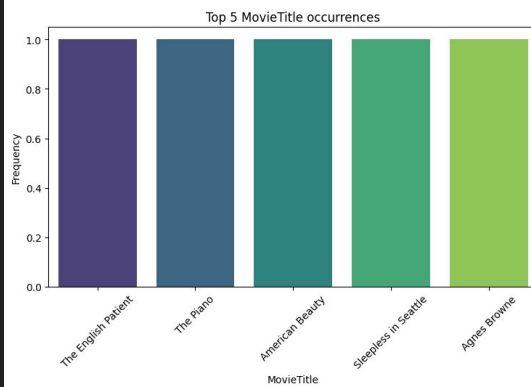
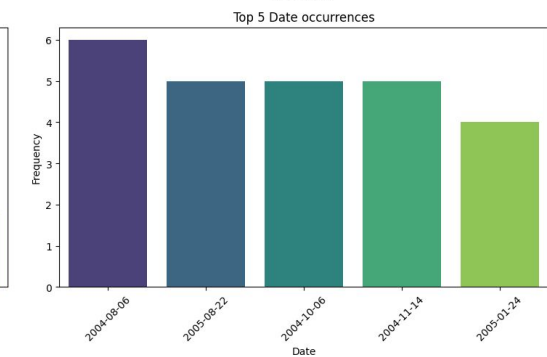
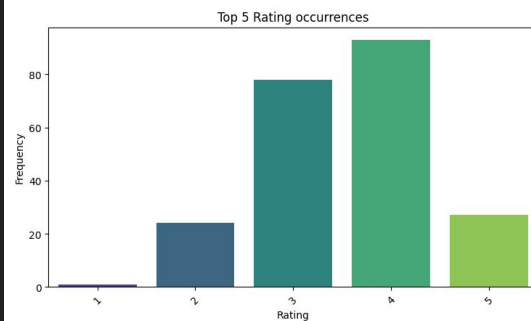
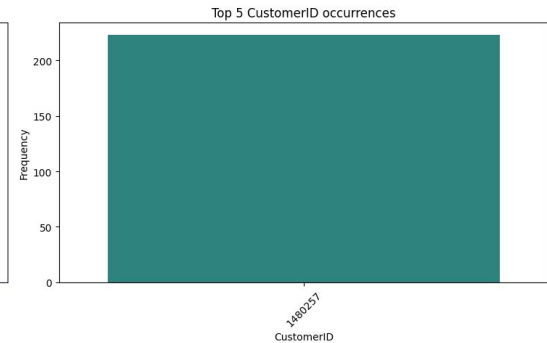
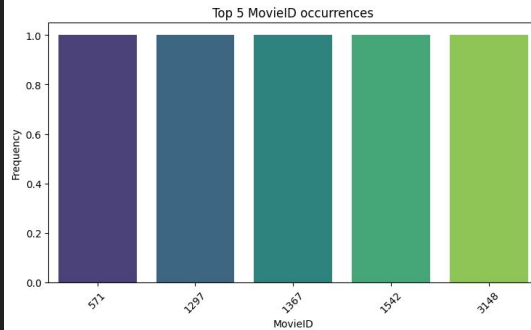


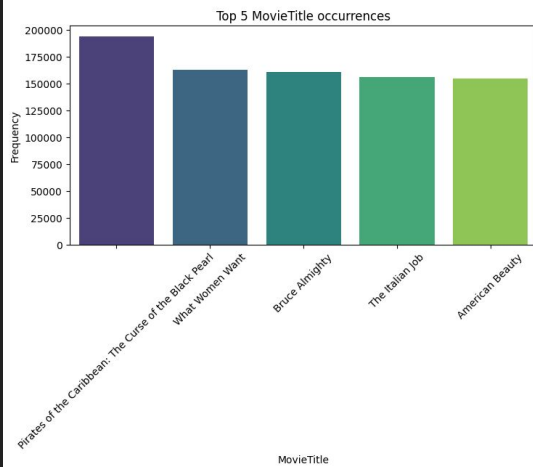
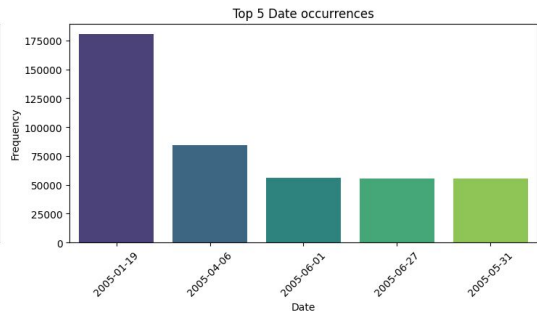
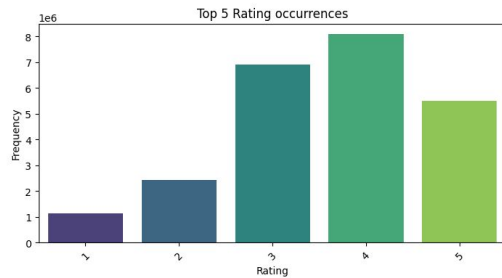
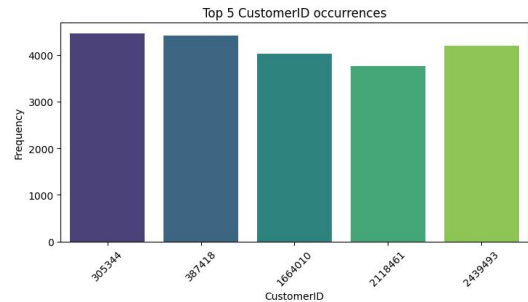
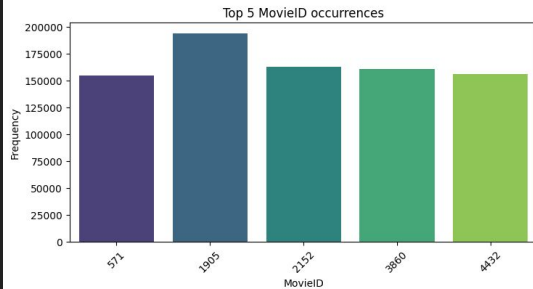
# SNARS - WEEK 13

RECOMMENDATION SYSTEMS

- sample a random user
- plot some statistics



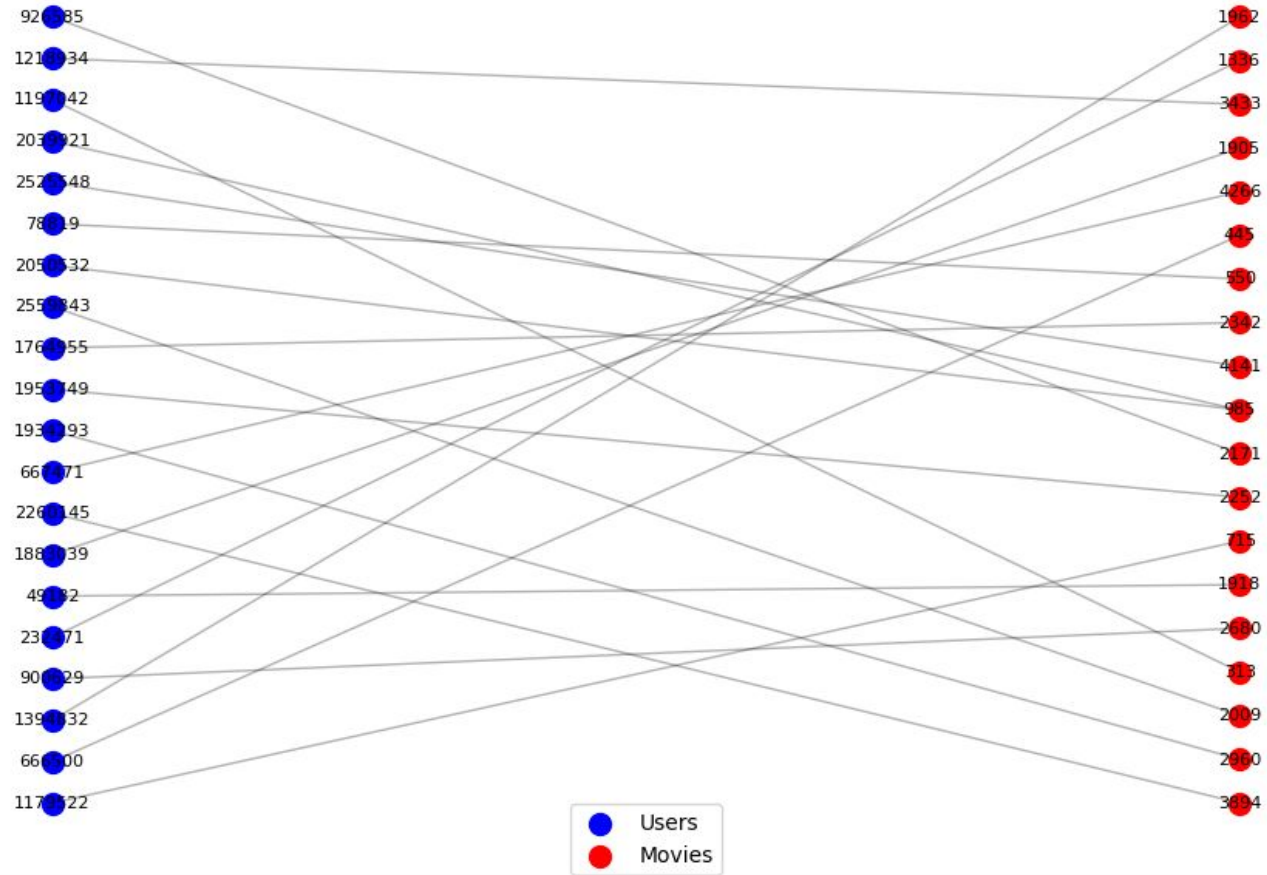
- consider the entire dataset
- plot some statistics



# User-Movie Interaction Network

- sample some rows
- build the network
- plot the network

Bipartite User-Movie Interaction Graph



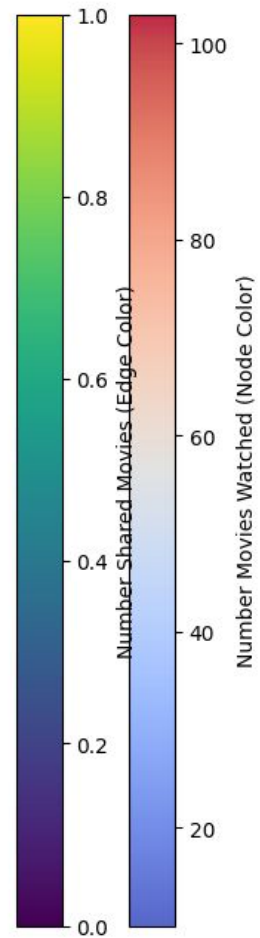
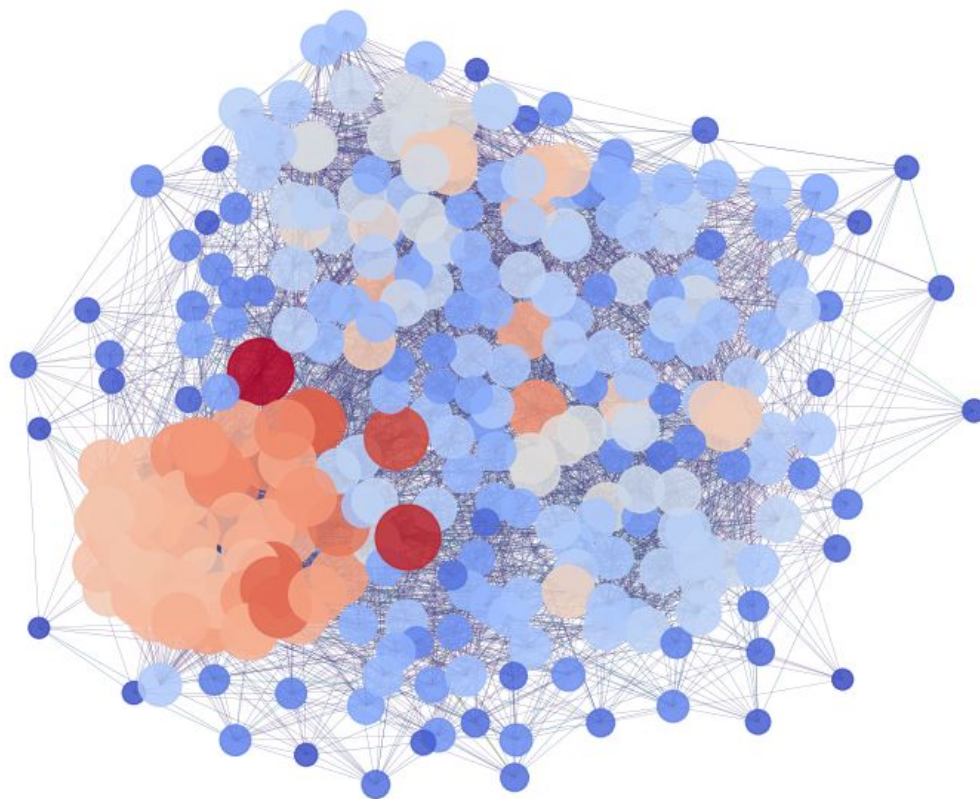
# User-Movie Interaction Network

- now we consider the full dataset
- build the network
- we do not plot it
- we proceed with further analysis on that

# User-User Similarity Network

- we project the User-Movie interaction network to User-User similarity network
- the similarity is based on the shared movies and ratings
- we build the network
- we plot a portion of it

User-User Similarity Graph (300 Users)

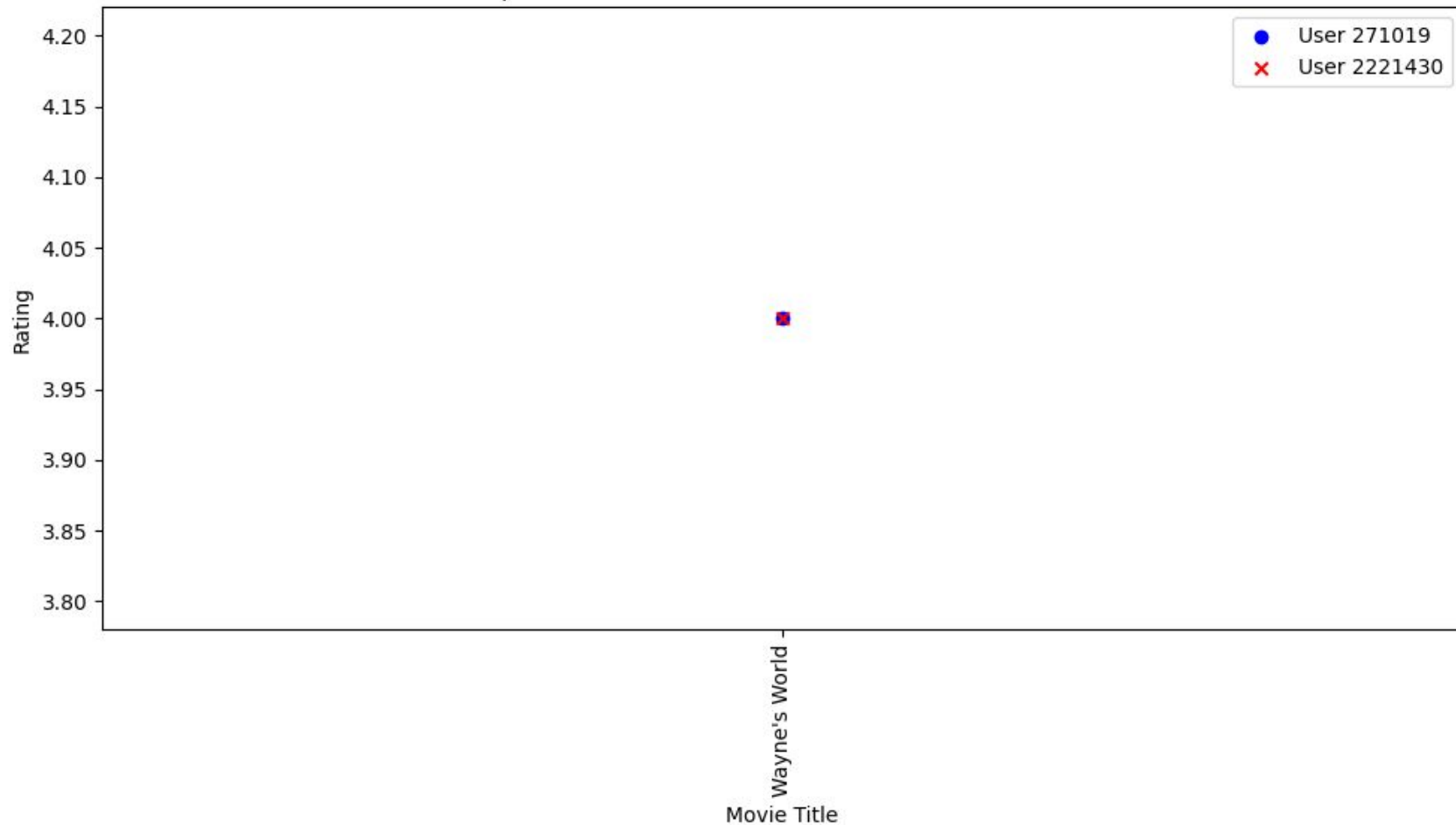




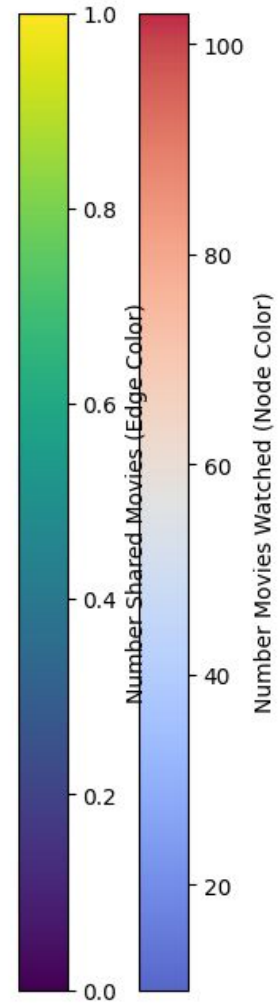
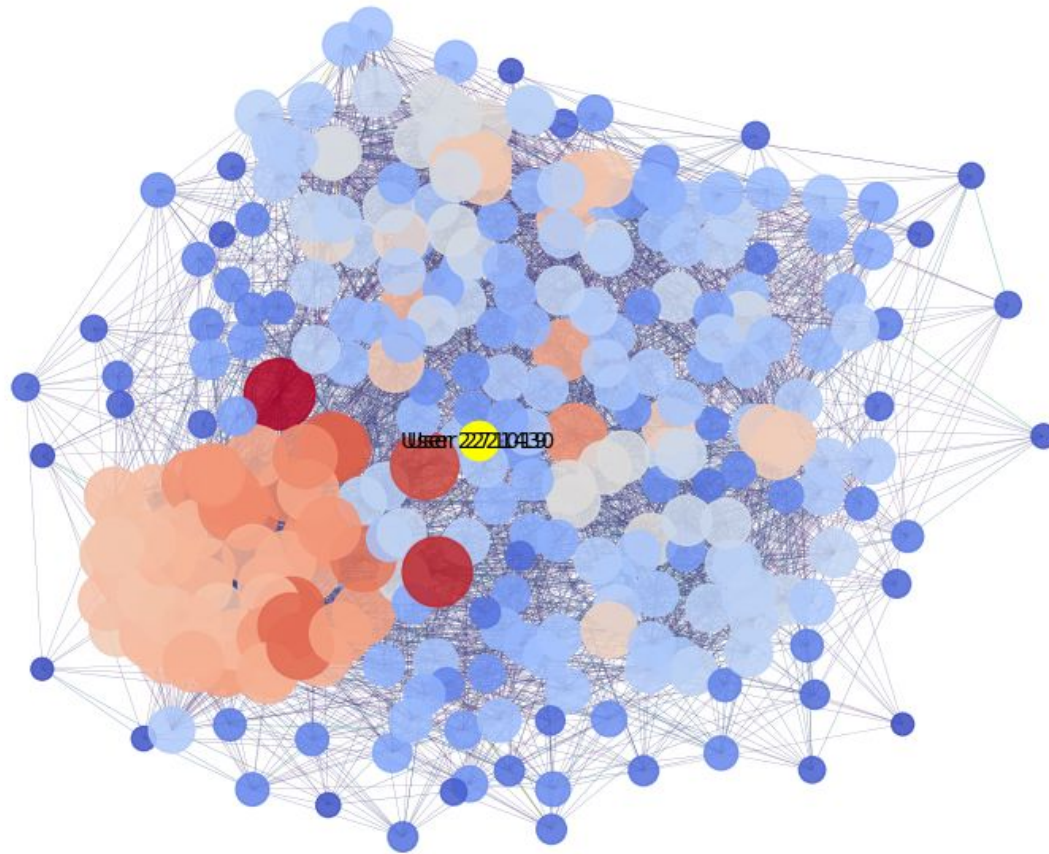
# Network Analysis

1. sample a random user from the network and find its most similar user
2. find the two most similar users within the network

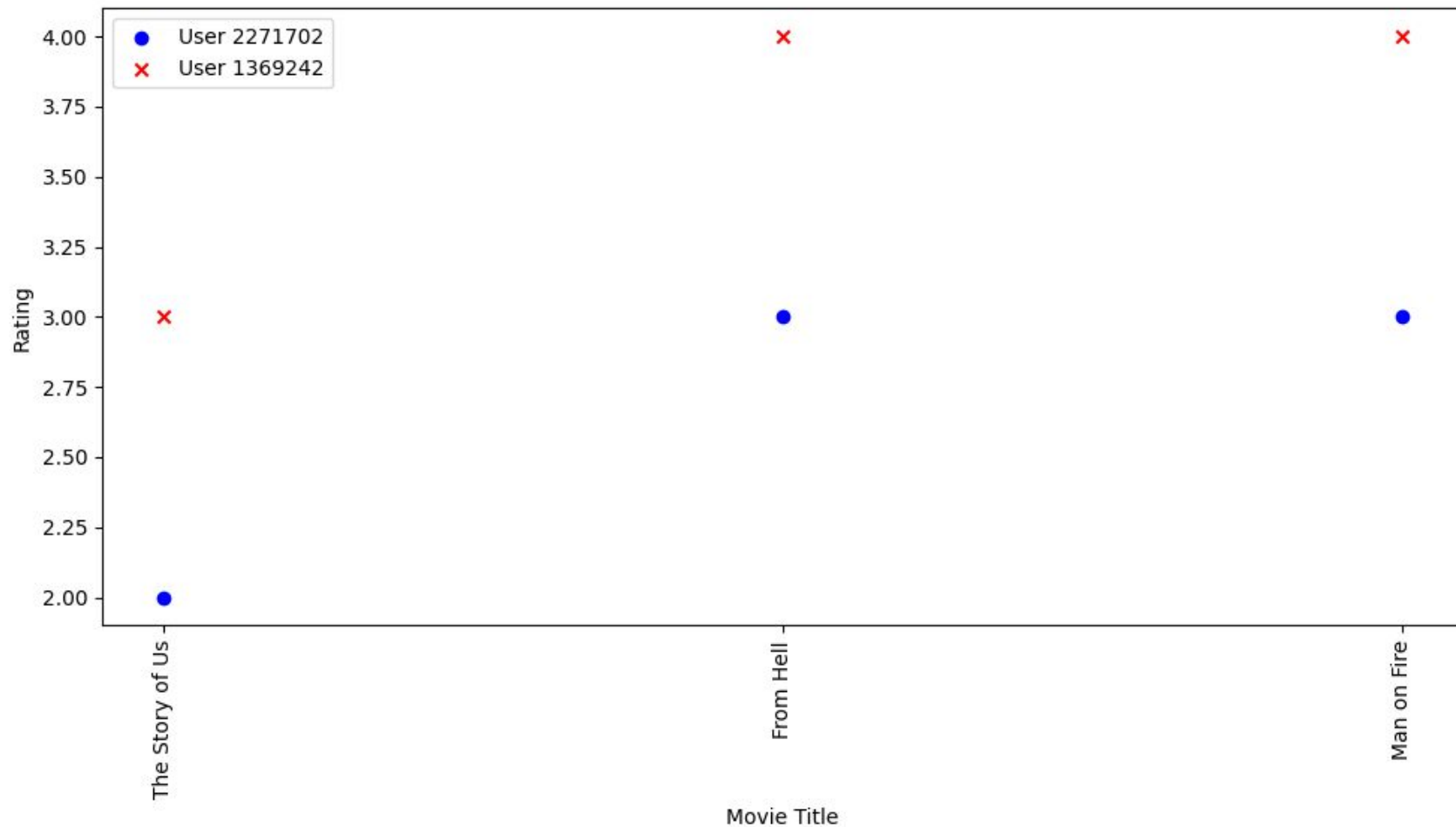
Sampled User: 271019 vs Most Similar User: 2221430



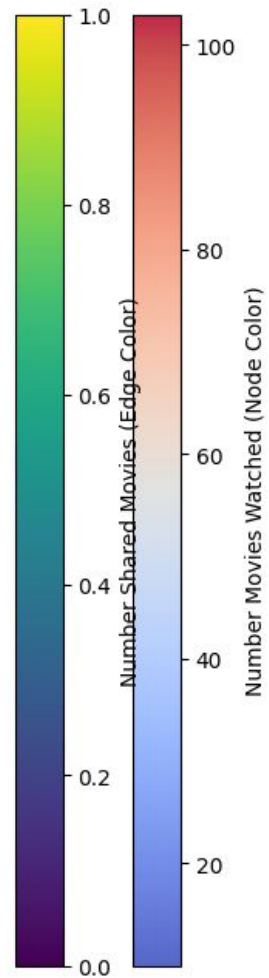
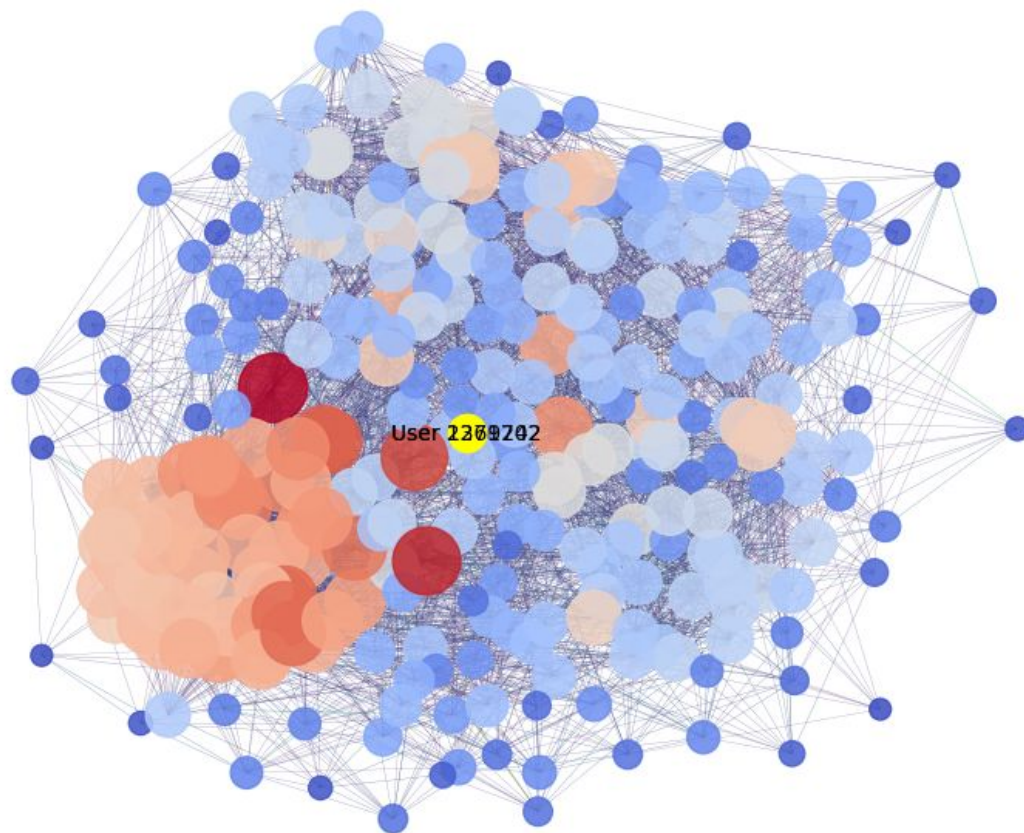
User-User Similarity Graph (300 Users)



Most Similar Users: 2271702 vs 1369242



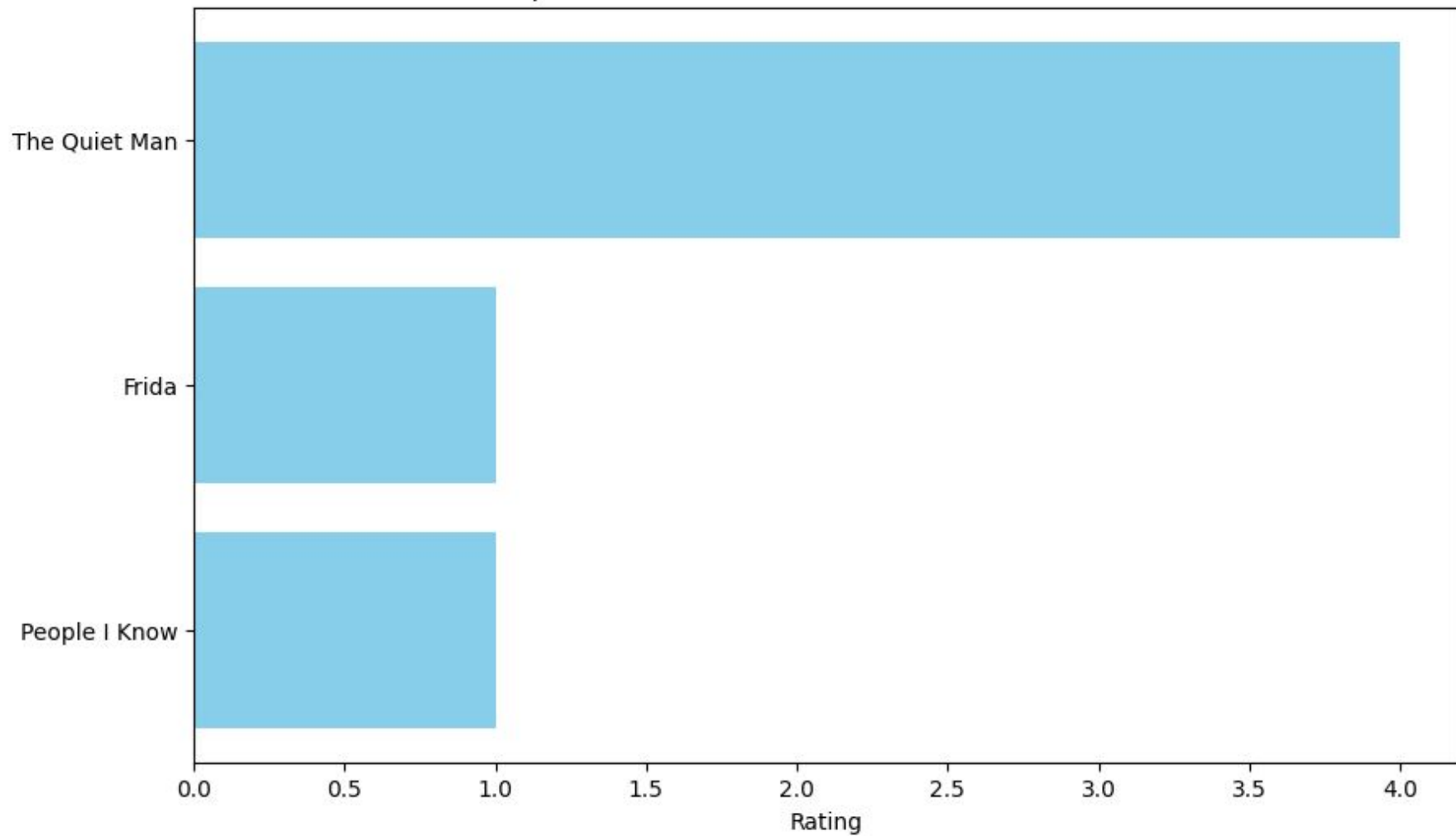
User-User Similarity Graph (300 Users)



# Generate Movie Recommendations

- based on similarity
- we suggest movies based on most similar user preferences

Top 5 Movie Recommendations for User 544779



Thank you for your attention