- 1. Unzip dataset files.
- 2. cd LLMSRec Syn/dataset/ml-1m/; unzip ml-1m.inter.zip

For data preparation details, please refer to LLMRank's [data-preparation].

3. Install dependencies.

pip install -r requirements.txt

- 4. Insert your OpenAl key on line 20 of ./model/rank.py.
- Evaluate OpenAl GPT (GPT-3.5-turbo)'s ranking abilities on ml-1m / (lastfm) dataset.

cd LLMSRec\_Syn/

To run the evaluation without any noise injection

python run test.py -m RankAggregated -d ml-1m / (lastfm)

```
| 10/10 [00:03<00:00, 2.71it/s]
17 Nov 20:24
                      INFO Received OpenAI Responses
 0%
                                                                                                                               | 0/200 [00:00<?, ?it/s]S
  Elmo's Fire
['Maybe, Maybe Not (Bewegte Mann, Der)', 'Walking and Talking', 'Mrs. Winterbourne', 'City Lights', 'Delicatessen', 'Return with Honor', 'The Battle of the Sexes', 'Phantasm II', 'The Phantom of the Opera', 'Street Fighter', 'Ace Vent ura: When Nature Calls', 'That Darn Cat!', 'Pather Panchali', 'Pale Rider', 'Ghostbusters II', 'Window to Paris', 'Ho osiers', 'Children of the Corn III', 'Executive Decision']
                                                                                                               | 200/200 [00:00<00:00, 851.01it/s]
100%
                      INFO SAVE DONE! Path: dataset/ml-1m\output_files\final11_gpt-3.5-turbo_ml-1m_RankAggregated_output_2
17 Nov 20:24
020.json
17 Nov 20:24
                      INFO recall@1 - 0.25 recall@5 - 0.625
                                                                                        recall@10 - 0.775
                                                                                                                         recall@20 - 0.995
                      L@50 - 0.995
                                                                                                   ndcg@20 - 0.5509
                                                                                                                                     ndcg@50 - 0.5509
 (t3m_env)    PS C:\Users\HARIKA\OneDrive\Desktop\nlp_sum\LLMSRec_Syn>
```

python run test.py -m RankNearest -d ml-1m / (lastfm)

```
20/20 [00:03<00:00,
17 Nov 20:27
               INFO Received OpenAI Responses
                                                                                | 200/200 [00:00<00:00, 833.10it/s]
100%
17 Nov
                     SAVE DONE! Path: dataset/ml-1m\output_files\final11_gpt-3.5-turbo_ml-1m_RankNearest_output_2020
      20:27
.json
17 Nov 20:27
                    recall@1 - 0.265 recall@5 - 0.62 recall@10 - 0.76
                                                                                recall@20 - 1.0 recall@50 - 1.0 ndcg@
 - 0.265
               ndcg@5 - 0.4521 ndcg@10 - 0.4962
                                                       ndcg@20 - 0.5569
                                                                                ndcg@50 - 0.5569
(t3m_env) PS C:\Users\HARIKA\OneDrive\Desktop\nlp_sum\LLMSRec_Syn>
```

python run\_test.py -m RankFixed -d ml-1m / (lastfm)

```
| 20/20 [00:03<00:00,
17 Nov 20
100%
                                                                                  | 200/200 [00:00<00:00, 916.71it/s]
                      SAVE DONE! Path: dataset/ml-1m\output_files\final11_gpt-3.5-turbo_ml-1m_RankFixed_output_2020.j
17 Nov 20:31
son
17 Nov 20:31
                INFO recall@1 - 0.195 recall@5 - 0.58 recall@10 - 0.74
                                                                                 recall@20 - 1.0 recall@50 - 1.0 ndcg@
                ndcg@5 - 0.3993 ndcg@10 - 0.4517
                                                        ndcg@20 - 0.5163
 - 0.195
                                                                                 ndcg@50 - 0.5163
               \Users\HARIKA\OneDrive\Desktop\nlp_sum\LLMSRec_Syn> |
(t3m env) PS
```

6. To run the evaluation with noise injection

#### python run\_test.py -m RankAggregated -d ml-1m --noise\_type random -noise\_ratio 0.3

```
| 10/10 [00:02<00:00, 3.39it/s]
17 Nov 20:36 INFO Received OpenAI Responses
 40%|
                                                                                                              | 79/200 [00:00<00:00, 719.03it/s]R
obocop
['The Basketball Diaries', 'Universal Soldier: The Return', 'Up Close and Personal', 'Hocus Pocus', 'Friday the 13th Part VIII: Jason Takes Manhattan', 'Phantasm II', 'The Crossing Guard', 'Like Water for Chocolate (Como agua para cho colate)', "The Brain That Wouldn't Die"]
100%|
                                                                                                            | 200/200 [00:00<00:00, 796.22it/s]
17 Nov 20:36
                     INFO SAVE DONE! Path: dataset/ml-1m\output_files\final11_gpt-3.5-turbo_ml-1m_RankAggregated_output_2
020.json
17 Nov 20:36
                     INFO recall@1 - 0.125 recall@5 - 0.47 recall@10 - 0.655
                                                                                                           recall@20 - 0.995
                                                                                                                                           recall@50 - 0
1995 ndcg@1 - 0.125 ndcg@5 - 0.2955 ndcg@10 - 0.3555 ndc
(t3m_env) PS C:\Users\HARIKA\OneDrive\Desktop\nlp_sum\LLMSRec_Syn>
                                                                                     ndcg@20 - 0.4404
                                                                                                                      ndcg@50 - 0.4404
```

# python run\_test.py -m RankAggregated -d ml-1m --noise\_type truncate -- noise ratio 0.3

## python run\_test.py -m RankAggregated -d ml-1m --noise\_type Duplicate -- noise ratio 0.3

```
'Persuasion', 'Meet the Deedles', 'In Search of the Castaways', 'Audrey Rose', 'The Jungle Book', 'It Conquered the World', 'Affliction']
 Westworld
['Young Frankenstein', 'Grand Canyon', 'Four Weddings and a Funeral', 'Room at the Top', "A Soldier's Daughter Never Cries", 'Bad Boys', 'Rambo: First Blood Part II', 'Mad Max Beyond Thunderdome', 'Running Scared', 'The NeverEnding St ory III', 'Tom & Viv', 'Jefferson in Paris', 'Jack', 'The Apple Dumpling Gang Rides Again', 'Pale Rider', "Bram Stoke r's Dracula", 'Gandhi', 'F/X', 'Run Lola Run (Lola rennt)']
Who's Afraid of Virginia Woolf?
Who is Affatu of Virgina woot?

['The Last Temptation of Christ', 'The African Queen', 'The Paradine Case', 'Red Sorghum (Hong Gao Liang)', 'Top Hat', 'Run Lola Run (Lola rennt)', 'The Secret of Roan Inish', 'The Myth of Fingerprints', 'Broken English', 'The Yards', 'Run Silent, Run Deep', 'Canadian Bacon', 'The Brandon Teena Story', 'Nosferatu (Nosferatu, eine Symphonie des Graue ns)', 'Dracula', 'Sliding Doors', 'Unzipped', "The Rich Man's Wife", "Porky's"]
                                                                                                                                                                               | 98/200 [00:00<00:00, 896.69it/s]C
  49%
 op Land
of Land
['Kolya', 'Lone Star', 'My Giant', 'The Greatest Show on Earth', 'Aiqing wansui', 'Jar, The (Khomreh)', 'Delta of Ven
us', 'Star Trek III: The Search for Spock', 'Psycho II', 'Addicted to Love', 'Shaft', 'Under Capricorn', '2 Days in t
he Valley', 'Surf Nazis Must Die', "Who's Harry Crumb?", 'Tokyo Fist', 'The Substitute', 'Palmetto', 'Spy Hard']
North by Northwest
['City Lights', 'American in Paris, An', 'That Thing You Do!', 'Ruby in Paradise', "The Butcher's Wife", 'Dancing at Lughnasa', "The 'burbs", 'Me Myself I', 'Best Man, The (Il Testimone dello sposo)', 'Small Soldiers', 'Three to Tango', 'The Invisible Man', 'Cross of Iron', 'Cujo', 'The Cable Guy', 'Anne Frank Remembered', 'Star Trek V: The Final Frontier', 'Amityville 3-D', "Child's Play 3"]
                                                                                                                                                                           | 200/200 [00:00<00:00, 913.59it/s]
100%
                                  INFO SAVE DONE! Path: dataset/ml-1m\output_files\final11_gpt-3.5-turbo_ml-1m_RankAggregated_output_2
17 Nov 20:56
020.json
17 Nov 20:56
l@50 - 0.975
                                  INFO recall@1 - 0.5
                                                                                    recall@5 - 0.695
                                                                                                                                        recall@10 - 0.785
                                                                                                                                                                                          recall@20 - 0.975
                                                                                                                                                                                                                                              recal
                                  ndcg@20 - 0.6774
                                                                                                                                                                                                            ndcg@50 - 0.6774
 (t3m_env) PS C:\Users\HARIKA\OneDrive\Desktop\nlp_sum\LLMSRec_Syn>
```

7. We also tried for different seeds also.

### python run\_test.py -m RankNearest -d ml-1m --noise\_type duplicate --noise\_ratio 0.3 -sd 42

```
['The Rock', 'Just Cause', 'The Mighty Ducks', 'Cobb', "Ulee's Gold", 'Annie Hall', 'Casablanca', 'Enchanted April', 'S
all We Dance? (Shall We Dansu?)', 'The Hudsucker Proxy', 'Get Over It', 'Trekkies', 'Easy Money', 'Wrongfully Accused',
'Jimmy Hollywood', 'Shattered Image', "I Love You, Don't Touch Me!", 'The Baby', 'Wilde']
 'Ilchael Collins', 'The Rocketeer', 'Santa Claus: The Movie', 'The Abyss', 'Magnum Force', 'Good Morning, Vietnam', 'Th
e War at Home', 'Visitors, The (Les Visiteurs)', 'Eternity and a Day (Mia eoniotita ke mia mera )', 'Funny Face', 'Romeo
and Juliet', 'Godzilla 2000 (Gojira ni-sen mireniamu)', 'Winnie the Pooh and the Blustery Day', 'Fall Time', 'The Compu
ter Wore Tennis Shoes', 'Tarzan the Fearless', 'One Little Indian', 'Teaching Mrs. Tingle', 'Boxing Helena']
  Patton
['Apocalypse Now', 'The Broken Hearts Club', 'Gods and Monsters', 'The Asphalt Jungle', 'The War Zone', 'Indiana Jones and the Temple of Doom', 'The Man Without a Face', 'Just the Ticket', 'Girlfight', 'Elstree Calling', 'Shiloh', 'A Good Man in Africa', 'The Jungle Book', 'Duets', "The 'burbs", 'Homeward Bound II: Lost in San Francisco', "You've Got Mail", 'One Fine Day', 'Halloween: The Curse of Michael Myers']
Beyond the Mat
['The Commitments', 'The 13th Warrior', 'Mighty Aphrodite', 'The Getaway', 'Mortal Kombat: Annihilation', 'The Road to ellville', 'Twin Dragons (Shuang long hui)', "Ferris Bueller's Day Off", 'Yankee Zulu', 'The Secret Agent', 'Black Dog' 'Pal Joey', 'Diebinnen', 'Exit to Eden', 'Target', 'I Got the Hook Up', 'Herbie Goes Bananas', 'Tango', 'The Life and imes of Hank Greenberg']
Jaws 3-D
  ['The Terminator', 'Addams Family Values', 'Lord of Illusions', 'Assassins', 'Black Sabbath (Tre Volti Della Paura, I)',
'The Thing', 'Fatal Attraction', 'Everyone Says I Love You', 'Full Speed', 'Terminal Velocity', 'Bonheur, Le', 'The Gno
me-Mobile', 'Holiday Inn', 'One Tough Cop', 'Juno and Paycock', 'The Mask of Zorro', 'Jeffrey', 'Children of a Lesser Go
me-Mobile', <sup>'</sup>Ho
d', <u>'</u>Head On']
100%
                                                                                                                                                                                         200/200 [00:00<00:00, 1430.54it/s]
18 Nov 01:54
                                   INFO SAVE DONE! Path: dataset/ml-1m\output_files\final11_gpt-3.5-turbo_ml-1m_RankNearest_output_42.json
18 Nov 01:54
                                   INFO Evaluation completed in 66.32 seconds
                                                                                                                           recall@5 - 0.705
                                                                                                                                                                                   recall@10 - 0.785
18 Nov 01:54
                                   INFO Test Results:recall@1 - 0.445
                                                                                                                                                                                                                                         recall@20 - 0.97
                 recall@50 - 0.975
                                                                       ndcg@1 - 0.445 ndcg@5 - 0.5788 ndcg@10 - 0.6045
                                                                                                                                                                                                    ndcg@20 - 0.6507
  (t3m_env) PS C:\Users\Gouthami Sravya\Downloads\NLP_HW3\LLMSRec_Syn>
```

#### python run test.py -m RankAggregated -d ml-1m / (lastfm) -sd 123