

**CSE 523 Machine Learning Project Report**  
**Movie Recommender System**  
**weekly Report**

**-Kashish Jivani(AU1940161)**

**-Neel Papat(AU1940165)**

**-Yashvi Navadia(AU1940123)**

**Hybrid based Recommendation system :**

Task Completed :

- Completed implementation of the hybrid recommendation system.
- We have tried to build a simple hybrid recommender that brings together techniques we have implemented in the content based and collaborative filter based engines. This is how it will work:
  - Input: User ID and the Title of a Movie
  - Output: Similar movies sorted on the basis of expected ratings by that particular user.
- Here we have mapped columns of ['movieId', 'id'] from the user specified database and movie csv file.

Outcome of the task performed:

```
[225]: hybrid(1, 'Avatar')
```

	title	vote_count	vote_average	year	id	est
1011	The Terminator	4208.0	7.4	1984	218	3.107136
8401	Star Trek Into Darkness	4479.0	7.4	2013	54138	3.100065
2014	Fantastic Planet	140.0	7.6	1973	16306	3.057599
1668	Return from Witch Mountain	38.0	5.6	1978	14822	3.045367
974	Aliens	3282.0	7.7	1986	679	3.017432
522	Terminator 2: Judgment Day	4274.0	7.7	1991	280	2.984794
8658	X-Men: Days of Future Past	6155.0	7.5	2014	127585	2.885741
922	The Abyss	822.0	7.1	1989	2756	2.826237
1621	Darby O'Gill and the Little People	35.0	6.7	1959	18887	2.784422
7265	Dragonball Evolution	475.0	2.9	2009	14164	2.768418

Here we can see that the Terminator movie would be rated best by the user 1 if he currently is watching the movie “Avatar”.

```
[226]: hybrid(500, 'Avatar')
```

	title	vote_count	vote_average	year	id	est
1668	Return from Witch Mountain	38.0	5.6	1978	14822	3.500952
1011	The Terminator	4208.0	7.4	1984	218	3.466311
522	Terminator 2: Judgment Day	4274.0	7.7	1991	280	3.446391
2014	Fantastic Planet	140.0	7.6	1973	16306	3.272774
1621	Darby O'Gill and the Little People	35.0	6.7	1959	18887	3.221758
974	Aliens	3282.0	7.7	1986	679	3.180980
8401	Star Trek Into Darkness	4479.0	7.4	2013	54138	3.084652
3060	Sinbad and the Eye of the Tiger	39.0	6.3	1977	11940	3.047212
1376	Titanic	7770.0	7.5	1997	597	3.038276
7265	Dragonball Evolution	475.0	2.9	2009	14164	2.900639

**But if the user changes from 1 to 500 th the Movie recommended changes from “Terminator” to “Return from Witch mountain” .**

- The recommended movie differs from users to users which makes the recommendation system more real time and user friendly.
- The similarity score between the movie recommender and the user rating is the main attraction point which makes the weight of both of them equal.

#### References :

- C. M. Wu, D. Garg and U. Bhandary, "Movie Recommendation System Using Collaborative Filtering," 2018 IEEE 9th International Conference on Software Engineering and Service Science (ICSESS), 2018, pp. 11-15,
- S. Agrawal and P. Jain, "An improved approach for movie recommendation system," 2017 International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC), 2017, pp. 336-342,