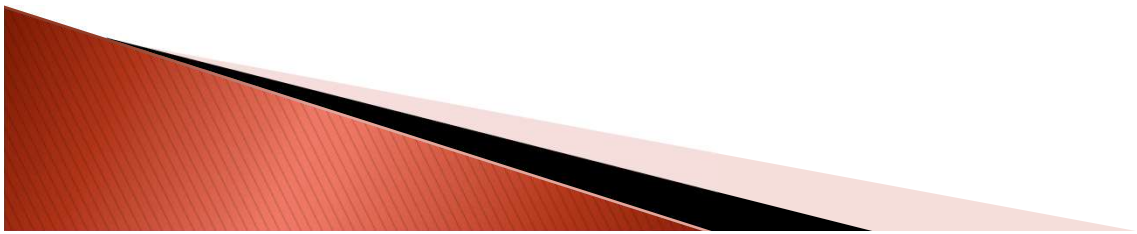
MOVIE RECOMMENDATION SYSTEM

By:
Prasanna Lad (22)
Devesh Panchal (31)
Rutuja Parab (32)

Guided By:
Mr. Sunil Katkar Sir

ABSTRACT

Nowadays, the recommendation system has made finding the things easy that we need. Movie recommendation systems aim at helping movie enthusiasts by suggesting what movie to watch without having to go through the long process of choosing from a large set of movies which go up to thousands and millions that is time consuming and confusing. In this article, our aim is to reduce the human effort by suggesting movies based on the user's interests. To handle such problems, we introduced a model combining both content-based and collaborative approach. It will give progressively explicit outcomes compared to different systems that are based on content-based approach. Content-based recommendation systems are constrained to people, these systems don't prescribe things out of the box, thus limiting your choice to explore more. Hence, we have focused on a system that resolves these issues.



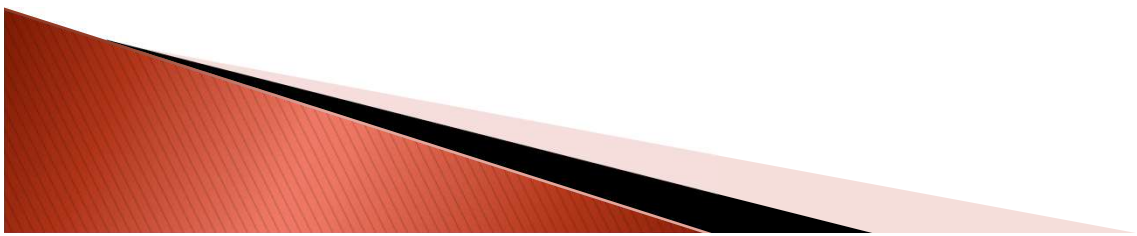
Software & Hardware Required

- Language: Python, HTML
- Libraries: Pandas, Pickle
- Python Framework : Flask
- Dataset : Movielens
- Cloud Host: Heroku

- Processor:Intel(R) Core(TM) i3-4030U CPU @ 1.90GHz 1.90 GHz
- RAM:4.00 GB
- System type:64-bit operating system, x64-based processor

Objective

- To Give user there recommended movie list from there choices
- Obtain correct recommendations from the working system.

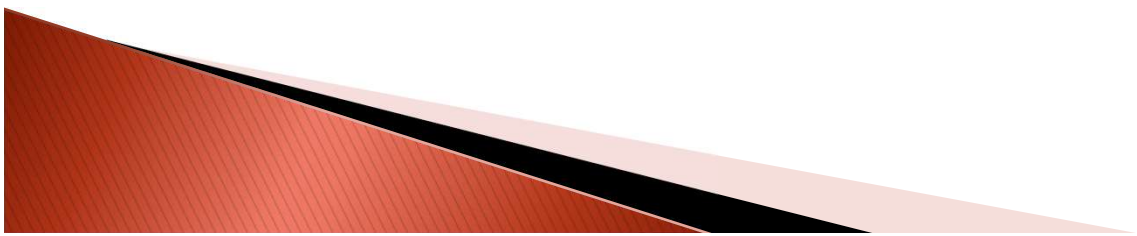


Algorithm: Collaborative filtering

- Collaborative filtering technique is to find similar group of user and provides recommendation based on similar taste within that groups.
- A user might be interested in what similar users are interested in.
- Collaborative filtering takes user's ratings and similar user's ratings into consideration

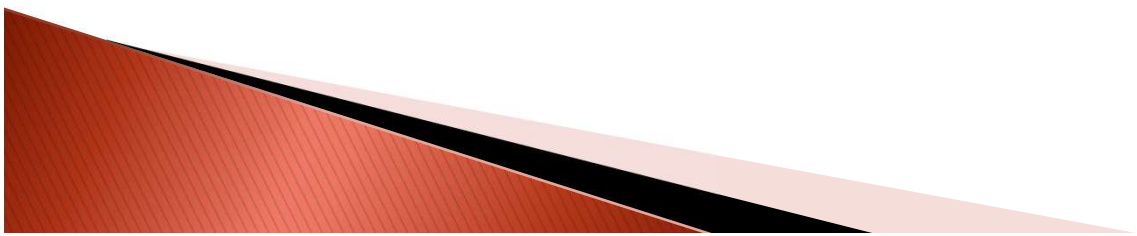
Collaborative filtering Working

- Obtain movie rating for some movies form active user
- Based on rating, find the top X neighbours
- Calculate similarity score
- Recommend movies with the highes score and most watched by similar users

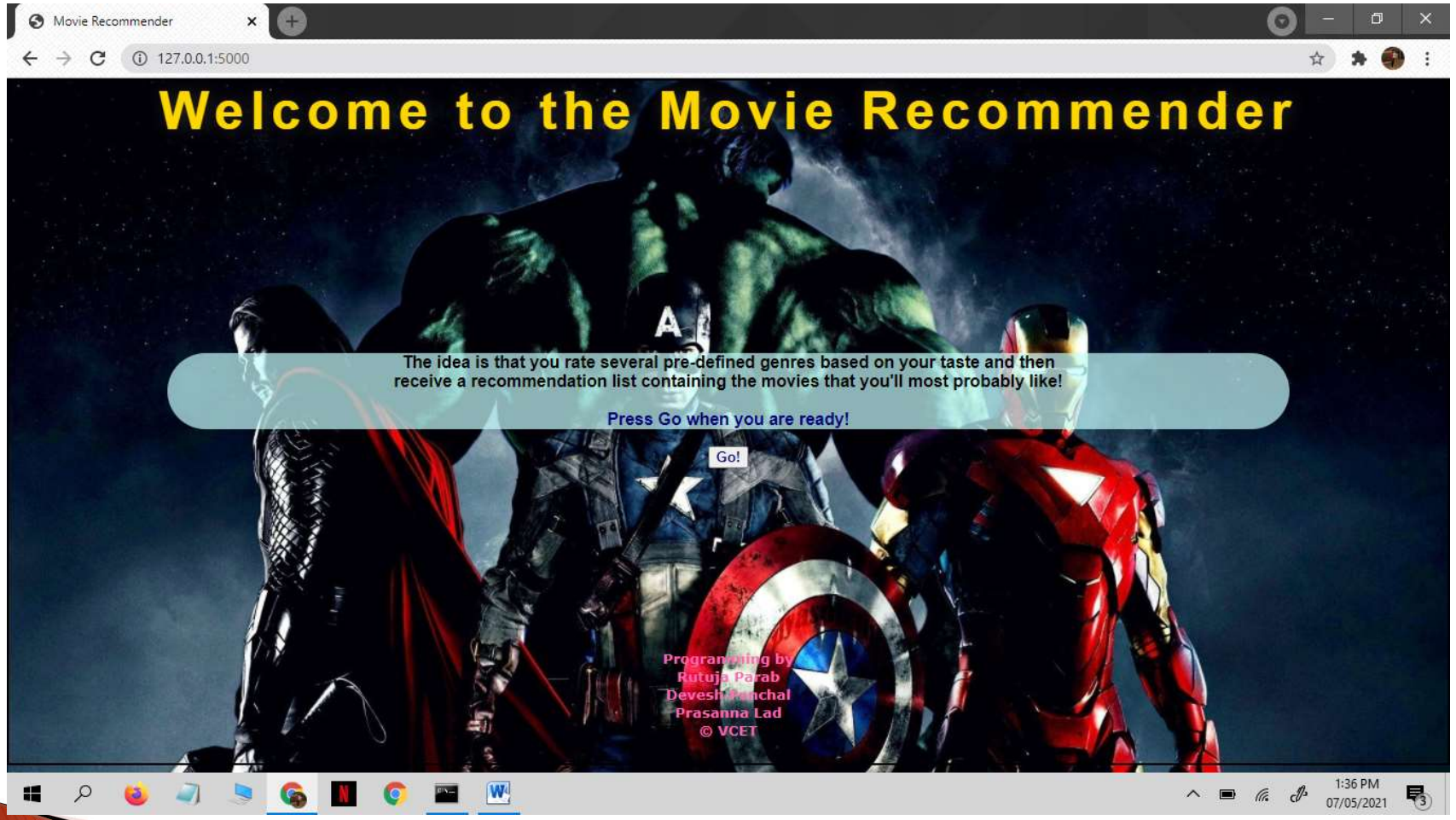


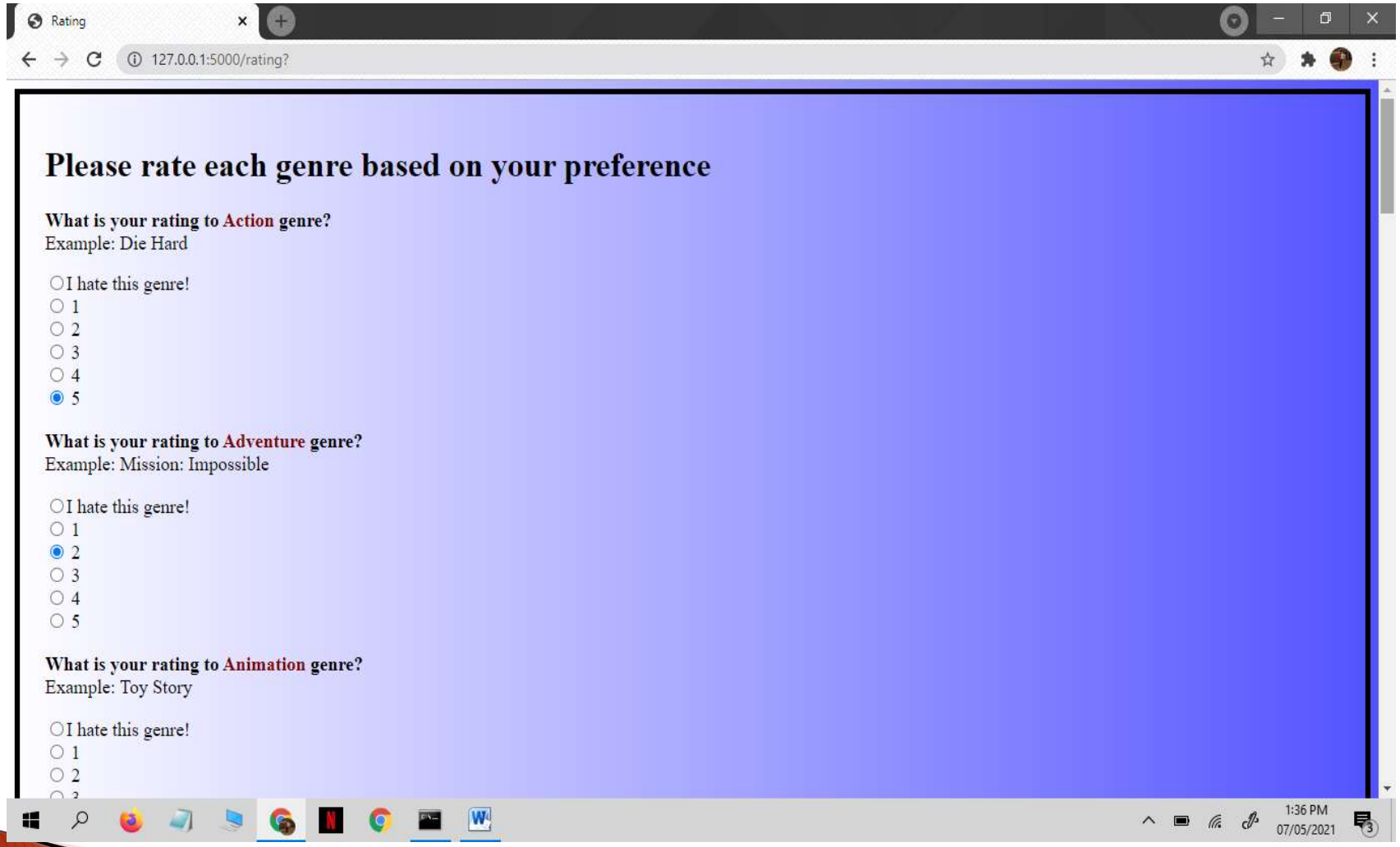
Dataset: MovieLens

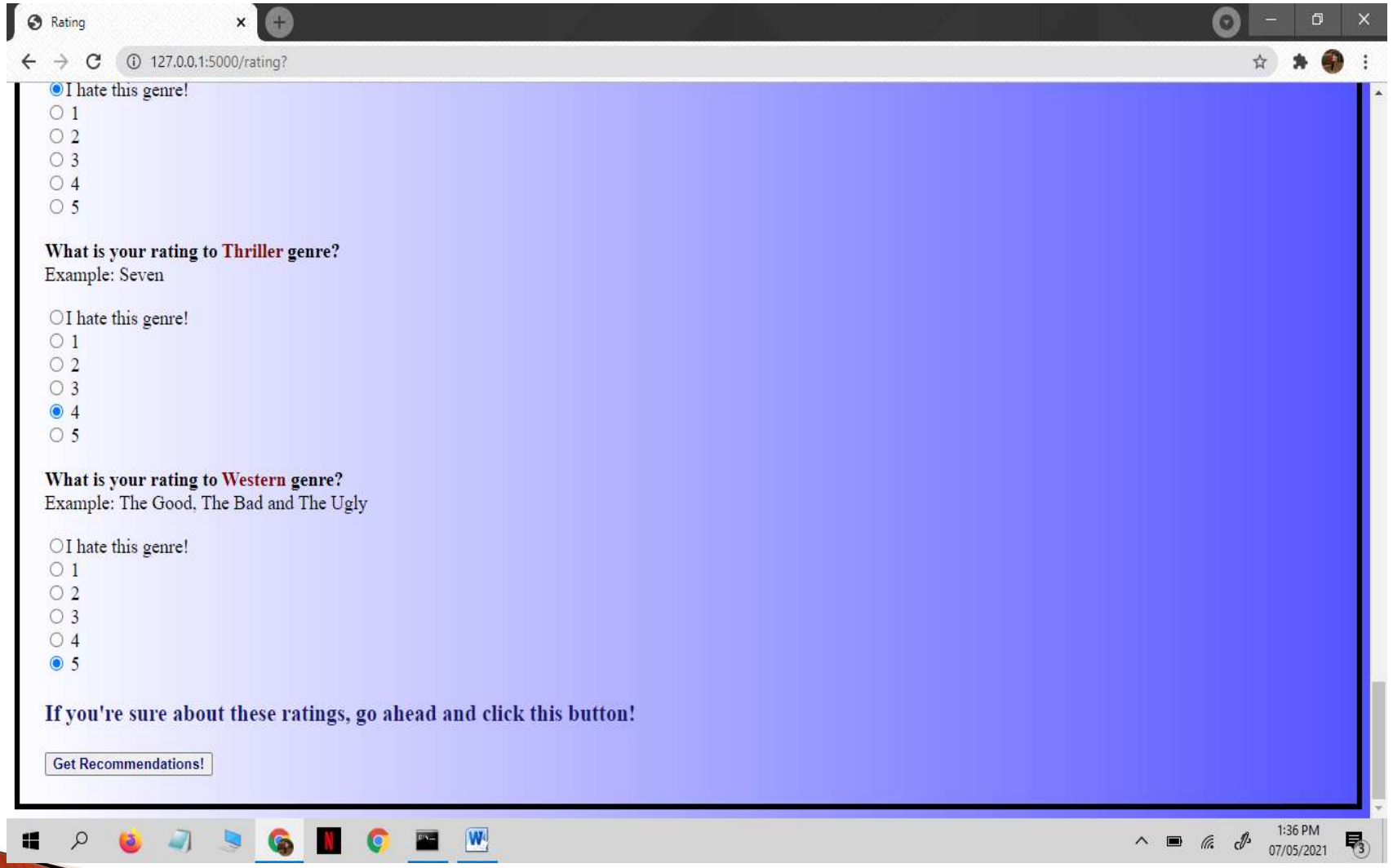
The **MovieLens** datasets, first released in 1998, describe people's expressed preferences for movies. These preferences take the form of tuples, each the result of a person expressing a preference (a 0-5 star rating) for a movie at a particular time. These preferences were entered by way of the MovieLens web site1 — a recommender system that asks its users to give movie ratings in order to receive personalized movie recommendations.



Implementation




Rating
127.0.0.1:5000/rating?
Please rate each genre based on your preference
What is your rating to Action genre?
Example: Die Hard
I hate this genre!
1
2
3
4
5
What is your rating to Adventure genre?
Example: Mission: Impossible
I hate this genre!
1
2
3
4
5
What is your rating to Animation genre?
Example: Toy Story
I hate this genre!
1
2
1:36 PM
07/05/2021

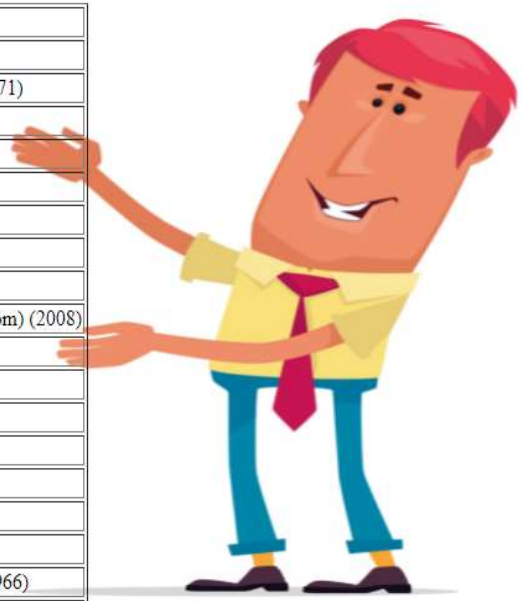

Rating
127.0.0.1:5000/rating?
I hate this genre!
1
2
3
4
5
What is your rating to Thriller genre?
Example: Seven
I hate this genre!
1
2
3
4
5
What is your rating to Western genre?
Example: The Good, The Bad and The Ugly
I hate this genre!
1
2
3
4
5
If you're sure about these ratings, go ahead and click this button!
Get Recommendations!
1:36 PM
07/05/2021

Recommendations

127.0.0.1:5000/recommendation

Here are the top-20 movies that you'll most probably like:

Recommendation List
Rango (2011)
Duck, You Sucker (A.K.A. Fistful Of Dynamite, A) (Giù La Testa) (1971)
Seraphim Falls (2006)
Last Of The Mohicans, The (1992)
Alamo, The (1960)
I Will Fight No More Forever (1975)
3:10 To Yuma (1957)
Seven Ways From Sundown (1960)
Good, The Bad, The Weird, The (Joheunnom Nabbeunnom Isanghannom) (2008)
Northwest Passage (1940)
Lone Ranger, The (2013)
Shanghai Noon (2000)
The Gun That Won The West (1955)
Red River (1948)
Outlaw Josey Wales, The (1976)
Guns Of The Magnificent Seven (1969)
Good, The Bad And The Ugly, The (Buono, Il Brutto, Il Cattivo, Il) (1966)
Kansas Raiders (1950)
Monte Walsh (2003)
Legend Of Zorro, The (2005)



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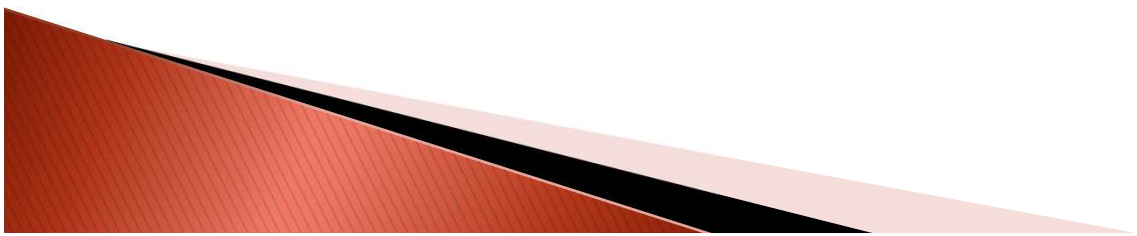
Future Scope

There are various areas of recommendation system discussed . Various techniques are also discussed which works in giving recommendation. So, scope of any recommender system is to build a model in such a way that their user gets proper recommendation and efficiency of the system is maintained.



Conclusion

Recommendation system open new opportunities of retrieving personalized information on the Internet. This strategy helps in improving accuracy of the recommendations.