

Performance analysis of a movie recommendation system can involve several metrics depending on the context and goals of the system. Some of the common performance metrics are:

1. **Accuracy:** It measures how accurately the system recommends movies that a user likes. This can be measured by comparing the recommended movies to the movies that the user actually likes or has rated highly.
2. **Coverage:** It measures how many movies the system can recommend to a user. A higher coverage means that the system can recommend a wider variety of movies to the user.
3. **Diversity:** It measures how diverse the recommended movies are. A higher diversity means that the system recommends movies from different genres or with different themes.
4. **Novelty:** It measures how novel the recommended movies are. A higher novelty means that the system recommends movies that the user hasn't watched or rated before.
5. **Serendipity:** It measures how surprising or unexpected the recommended movies are. A higher serendipity means that the system recommends movies that the user wouldn't have thought of watching otherwise.

But to study the accuracy of the Movie Recommendation system it requires ground truth data or user feedback

One way to evaluate the performance of the movie recommender system is to manually test it by entering a few movies and checking if the recommended movies are similar or related to the entered movies.