Assignment - 3

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Subject Name: Principles of AI   **Subject Code:** 20CST-258

1. Aim/Overview of the practical:

What are Recommender Systems? Explain with example.

2. Theories:

Recommender Systems:

A recommendation system, or a recommendation engine, is an algorithm based on cutting-edge technology such as Artificial Intelligence (particularly Machine Learning), which utilizes Big Data and customer behaviour to make relevant and customized recommendations.

These suggestions could be based on factors like past viewership/readership, demographic information, search history, affinity topics, recent interests, and many.

Typically, recommender systems operate on the following models:

- Collaborative Filtering
- Content-based Filtering
- Demographic-based Filtering
- Utility-based Filtering
- Knowledge-based Filtering
- Hybrid Filtering

However, Content recommendations on media websites add more value in the following ways:
- **Better Retention**: As consumers get to explore content that interests them, they are more likely to explore your collection rather than opt for your competitor.
- **Enhanced Engagement**: As the media website continues to make relevant recommendations, it becomes easier to target them with fresh or recirculated content.
- **Build Loyalty**: Customers appreciate businesses that value their time. Through relevant content-based recommendations, you save them from a long-drawn search process and cut right to what truly matters – content consumption.

- **Increase Sales**: For media websites that run subscription services, content recommender systems can serve trigger cues that facilitate sales and upselling.
- **Scalability**: Content recommender systems operate on customer data and match it up with automated metadata generation, making it easier to scale up or down depending on the number of users.
- **Recycle Content:** Content-based recommendations on Media websites, not only add to the digital experience but also capture highly specific interests of the user, and recommend niche content that very few other users may have an interest in.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			