Content Recommendation System

Abstract:

Content-based recommendation systems, i.e., systems that recommend an item to a user based upon a description of the item and a profile of the user's interests. Content-based recommendation systems may be used in a variety of domains ranging from recommending web pages, news articles, restaurants, television programs, and items for sale.

Although the details of various systems differ, content-based recommendation systems share in common a means for describing the items that may be recommended, a means for creating a profile of the user that describes the types of items the user likes, and a means of comparing items to the user profile to determine what to recommend.

The profile is often created and updated automatically in response to feedback on the desirability of items that have been presented to the user.

Existing System:

Recommendation systems make suggestions about artifacts to a user. For instance, they may predict whether a user would be interested in seeing a particular movie. Social recommendation methods collect ratings of artifacts from many individuals and use nearest-neighbour techniques to make recommendations to a user concerning new artifacts. However, these methods do not use the significant amount of other information that is often available about the nature of each artifact -- such as cast lists or movie reviews, for example.

This project presents an inductive learning approach to recommendation that is able to use both ratings information and other forms of information about each artifact in predicting user preferences. We show that our method outperforms an existing social-filtering method in the domain of movie recommendations on a dataset of more than 45,000 movie ratings collected from a community of over 250 users.

Proposed System:

A common scenario for modern recommendation systems is a Web application with which a user interacts. Typically, a system presents a summary list of items to a user, and the user selects among the items to receive more details on an item or to interact with the item in some way. For example, online news sites present web pages with headlines (and occasionally story summaries) and allow the user to select a headline to read a story. E-commerce sites often present a page with a list of individual products and then allow the user to see more details about a selected product and purchase the product. Although the web server transmits HTML

and the user sees a web page, the web server typically has a database of items and dynamically constructs web pages with a list of items.

Because there are often many more items available in a database than would easily fit on a web page, it is necessary to select a subset of items to display to the user or to determine an order in which to display the items.

Content-based recommendation systems analyse item descriptions to identify items that are of particular interest to the user.

Software Tools:

1. AWS EC2
2. AWS S3
3. AWS IAM
4. AWS SNS
5. AWS DynamoDB
6. AWS CloudWatch
7. VS Code
8. Python3
9. Boto3
10. AWS CLI

Hardware Tools:

1. Laptop
2. Operating System: Windows 11
3. RAM: 8GB
4. ROM: 4GB
5. Fast Internet Connectivity

Applications:

1. This architecture can be applied to e-learning content where the recommendations can happen with interests and skills.

2. E-Commerce, OTT platforms, Game Portals and other affiliated portals.