Implementation of Movie Recommendation System Using Hybrid Filtering Methods and Sentiment Analysis of Movie Reviews

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Abstract:

Users are faced with an overwhelming number of options in areas like entertainment, e-commerce, and online content consumption in today's digitally saturated world. Consequently, the ability to effectively find relevant and engaging content has emerged as a crucial user requirement. In order to overcome this difficulty, recommendation systems use artificial intelligence to provide tailored recommendations based on user preferences and usage trends. The goal of this project is to create a content-based movie recommendation system that finds and recommends films based on user interests by using cosine similarity. To ascertain how similar two films are to one another, the system converts textual data into vector representations by examining important movie metadata, including genres, plot summaries, and cast details. It then calculates similarity scores. These calculated similarities serve as the foundation for creating customized suggestions. A smooth and simple user experience is guaranteed by the use of Python throughout the entire solution's implementation and deployment as an interactive web application via Streamlit. The model is a useful tool for improving content discoverability in movie platforms because it provides a scalable, effective, and lightweight method appropriate for real-time recommendation scenarios.

Keywords:

Recommendation system, movie metadata, movie reviews, content based filtering, demographic filtering, sentiment analysis, natural language processing, countvectorizer, cosine similarity.