

CONTENT BASED RECOMMENDER SYSTEM USED FOR PREDICTING MOVIE POPULARITY AND TARGET AUDIENCE USING MACHINE LEARNING ALGORITHMS

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In the age of digital streaming platforms and online entertainment, the ability to predict the popularity of movies accurately and identify target audiences is crucial for content creators, distributors, and marketers. Content-based recommender systems, leveraging machine learning algorithms, have emerged as powerful tools for addressing these challenges. This paper presents a comprehensive approach to enhancing movie popularity prediction and target audience identification using the XGBoost and CatBoost algorithms. The proposed system begins by leveraging metadata attributes such as genre, cast, director, release year, and plot summary to create feature vectors representing each movie. These feature vectors capture the intrinsic characteristics of the movies, forming the basis for content-based recommendations. Next, the XGBoost and CatBoost algorithms are applied to the feature vectors to train predictive models. XGBoost is known for its scalability, efficiency, and high performance in handling structured data, while CatBoost excels in handling categorical features and dealing with sparse data. By leveraging the strengths of both algorithms, the predictive models achieve superior accuracy in predicting movie popularity and identifying target audience segments.