Collaborative Filtering with Implicit Feedback Data

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Abstract: *This research paper explores the application of collaborative filtering techniques to implicit feedback data within the Anime Recommendations Database. The study focuses on leveraging user behavior, such as viewing history and interactions, to provide personalized anime recommendations. We employ matrix factorization and nearest-neighbor approaches, comparing their effectiveness and efficiency in handling large datasets. Our results demonstrate significant improvements in recommendation accuracy and user satisfaction, highlighting the potential of collaborative filtering in the domain of anime recommendations.*

Recommender systems are super important for helping users find stuff they like, whether it's shows to watch, things to buy, or people to follow online. This study is all about using cool collaborative filtering techniques to make anime recommendations even better. We even tested these models and found that one called ALS works better with sparse data and gives more accurate recommendations than k-NN. Plus, we came up with a hybrid model that combines different approaches, and it's made a big difference in the quality of recommendations by solving the "cold-start" problem and offering more diverse suggestions. Our research shows that collaborative filtering is great for dealing with implicit feedback data, and we've got some practical ideas for making advanced recommendation systems for anime and other stuff too. This research paper explores the application of collaborative filtering techniques to implicit feedback data within the Anime Recommendations Database.

Keywords: Recommender Systems, Collaborative Filtering, Implicit Feedback, Matrix Factorization