



## Fifth Assignment (Data Science Course)

Due to: 2 Jan 2024

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### Recommendation System

#### Content-Based Methods

These methods create personalized shopping guides on Amazon by analyzing user likes and product details to provide tailored suggestions. User and product profiles are formed, considering elements like descriptions and categories. Amazon utilizes this information to recommend items aligning with individual preferences. The discussion explores how content-based methods operate in Amazon's recommendation system and their effectiveness in handling the extensive product range.

#### Collaborative Filtering Methods

Collaborative filtering acts as a team effort in Amazon's recommendations, considering the preferences of users with similar tastes. It examines what similar users have bought or liked, generating suggestions based on those patterns. The discussion explains how collaborative filtering works, its value in Amazon's recommendation system, and its adaptability to the dynamic online store with a diverse product range.

#### Dataset and task

students are required to implement two distinct methods for enhancing the recommendation capabilities: content-based methods and collaborative filtering methods. The goal is to design and implement at least one model for each method, utilizing these approaches to provide personalized and accurate suggestions to users.

#### NOTE

Keep in mind that essential preprocessing steps, such as feature engineering and feature selection, are required for this task. Don't restrict yourself solely to the mentioned methods; additional scores may be awarded based on the quality of your work, including the exploration and testing of advance algorithms. Again, we

emphasize the report; it should contain all your questions and your innovative findings. Use figures, pictures, and tables, and DO NOT PUT ANY CODE IN THE REPORT.

## Data

Amazon - Ratings (Beauty Products)

BigBasket Entire Product List

Good luck:)