Hemanth Kurra  
Wine Recommendation System

I have built a Shiny (R) application for a Wine Recommendation System using two datasets: wine\_facts.csv and wine reviews.csv. The datasets are combined, and a dynamic UI allows users to filter wines based on brand and minimum rating. The resulting DataTable displays relevant information about the wines, such as brand, categories, name, dimension, flavors, reviews.rating, reviews.title, reviews.text, and reviews.username.  
  
Data cleaning:- The datasets are combined using the bind\_rows function, creating a unified dataset (df3) that incorporates both wine facts and reviews.This combination allows for a comprehensive analysis, enabling users to make informed decisions based on various attributes.

The distinct function is applied to ensure uniqueness in certain columns (reviews.username, reviews.text, reviews.dateAdded, reviews.id, name, id, brand).This step helps eliminate any duplicate entries that might exist in the combined dataset, ensuring that each row provides distinct information.

The na.omit() function or similar methods may be applied to handle missing values in the dataset. This ensures that the application does not encounter errors or inconsistencies due to incomplete data. Specific columns relevant to the application's purpose are selected using the select function. This step streamlines the displayed information, providing users with key details about each wine.

How it Solves Wine Company Issues:

Improved Decision-Making: The application provides a streamlined interface for consumers to find the right wine based on their preferences. By allowing users to filter wines by brand and minimum rating, they can quickly identify wines that match their criteria.

Enhanced Customer Experience: The dynamic UI with real-time updates ensures a user-friendly experience. Consumers can easily explore and choose wines, leading to increased customer satisfaction and engagement.

Data-Driven Recommendations: By combining and analyzing the wine facts and reviews datasets, the application harnesses the power of data to provide meaningful recommendations. This assists consumers in making informed choices, potentially boosting sales for the wine company.

Product Functionality:

Brand Selection: Users can choose a specific wine brand from the dynamically populated dropdown menu. This allows for targeted exploration of wines from a particular brand.

Rating Filter: The application enables users to set a minimum rating, helping them discover wines that meet their desired quality standards.

Interactive DataTable: The main panel displays a DataTable with columns containing essential information about the wines, including brand, categories, name, dimension, flavors, reviews.rating, reviews.title, reviews.text, and reviews.username.

Screenshots and Usage:  
A screenshot of a computer

Description automatically generated  
  
Brand Selection: Users can select a specific wine brand from the dropdown menu.  
Rating Filter: Users can set a minimum rating to filter wines based on their quality preferences.  
Results Display: The DataTable updates in real-time, showcasing wines that match the selected brand and minimum rating.  
All Brands and Ratings: Users can choose "All" brands to explore wines from various brands without restricting the selection by brand.

Conclusion: The Wine Recommendation System built with Shiny provides a practical solution for the wine company, addressing issues related to customer decision-making and satisfaction. The application harnesses the power of data analytics to offer personalized recommendations, contributing to an enhanced overall customer experience and potentially driving sales for the wine company. The dynamic and intuitive interface ensures ease of use for consumers seeking the perfect wine match.  
  
  
  
References:-  
  
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