**Capstone Project Submission**

**Instructions:**

i) Please fill in all the required information.

ii) Avoid grammatical errors.

| **Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)** |
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| A book recommendation system is a type of recommendation system where we have to recommend similar books to the reader based on his interest.Recommendation systems are widely used today to recommend products to users based on their interests. A recommendation system is one of the strongest systems for increasing profits by retaining more users in a very big competition.  A book recommendation system can take into account many parameters like book content and book quality by filtering user reviews. In the section below, I will introduce you to a machine learning project on the book recommendation system using Python.  The similarity of users is determined by the similarity of the ratings given by the users to an item. Content-based filtering uses the description of the items and gives recommendations which are similar to the description of the items. With these two filtering systems, books are recommended not only based on the user’s behavior but also with the content of the books.  Clustering is a collaborative filtering technique that is used to build our recommendation system in which data points are grouped into clustersClustering is a collaborative filtering technique that is used to build our recommendation system in which data points are grouped into clusters  our recommendation system recommends books to the new users also. In this recommender system, books are recommended based on collaborative filtering technique and similar books are shown using content based filtering.  **Contributions Roles:-Individual**  **Business Problem:-**  **During the last few decades, with the rise of Youtube, Amazon, Netflix, and many other such web services, recommender systems have taken more and more place in our lives.**  **From e-commerce (suggest to buyers articles that could interest them) to online advertisement (suggest to users the right contents, matching their preferences), recommender systems are today unavoidable in our daily online journeys.**  **In a very general way, recommender systems are algorithms aimed at suggesting relevant items to users (items being movies to watch, text to read, products to buy, or anything else depending on industries).**  **Recommendation systems are really critical in some industries as they can generate a huge amount of income when they are efficient or also be a way to stand out significantly from competitors.**  **The main objective is to create a book recommendation system for users.**  **Approach:**  **1.Load the dataset**  **2.Summarize the data**  **3.Exploratory Data analysis**   * **Finding missing values** * **Filling missing values** * **Finding duplicate values**   **4.Recommendation System**  **5.Popularity Based Recommender System**  **6.Collaborative Filtering Based Recommender System**  **Conclusion:-**   * **Agatha Christie has 600 number of book which is top one author who have large number of book.rather than william shakespeare is great author but it followed by agatha** * **Harlequin has the most number of books published, followed by Silhouette.** * **Number of Books published yearly are between 1950 - 2005.** * **Most of the users are in 20-30 and 30-40 prefer more books.** * **As per ratings "Selected Poems" has been rated most followed by "Little Women". The countplot shows users have rated 0 the most, which means they haven't rated books at all.** * **The top 10 books recommendation as per ratings with top "The lovely Bones: A novel" with 707 book ratings. But this are not based on some recommendation system. They are top 10 books as per ratings.** |
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