DSC 680 -Project 1 Milestone 3

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# Answers to Q&A

**Questions:**

1. **Handling New User Scenario:**
   * *Answer:* For new users, leveraging demographic information provided during sign-up, such as geography, age group, and interests, can help in making initial movie recommendations. Over time, as the user provides more ratings, the system can refine recommendations based on their actual preferences.
2. **Addressing Synonymy:**
   * *Answer:* Data clean-up and validation activities should be implemented before building the recommendation model to handle synonymy issues. This may involve standardizing item names or using techniques like natural language processing to identify and reconcile similar terms.
3. **Scalability of the Model:**
   * *Answer:* While the model is scalable to handle varying data sizes, performance may slow down as the dataset grows. Considering the inclusion of other models like XGBoost can enhance scalability and improve overall system performance.
4. **Drawbacks of Collaborative Filtering:**
   * *Answer:* Collaborative filtering faces challenges in handling the cold-start problem. If an item is not present during training, the model struggles to create an embedding for it and cannot make predictions for that item.
5. **Drawbacks of Content-Based Filtering:**
   * *Answer:* Content-based filtering has limitations as it primarily relies on existing user interests, making it less effective in expanding recommendations beyond users' established preferences.
6. **Drawbacks of Demographic Filtering:**
   * *Answer:* Demographic filtering is a basic technique, and its recommendations may not be accurate since it recommends the same items to users with similar demographic features without considering individual preferences.
7. **Best Algorithm for Recommendation:**
   * *Answer:* Hybrid recommendation systems, combining content-based and collaborative filtering, are often considered the best approach for movie recommendations.
8. **Factors Considered in Movie Recommendations:**
   * *Answer:* Factors such as age, demographics, ethnicity, interests, language, top actors, director, related genres, and movie plot keywords are taken into consideration when recommending a movie to a user.
9. **Amount of Data for Predictions:**
   * *Answer:* Generally, more data and diverse data contribute to better predictions. The recommendation system's accuracy and relevance can improve with a larger and varied dataset.
10. **Re-training Frequency:**

* *Answer:* The recommender system may need to be re-trained if there are significant changes in user preferences. Anomaly detection models can identify shifts in user behavior, prompting re-training for accurate and up-to-date recommendations.