# **Project 1 : Movie Recommendation System**

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DSC680 – Applied Data Science

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April, 2025

**Movie Recommendation System**

**10 Audience Questions and answers**

1. How do you handle new users or movies (cold start)?

**Answer :** Use demographic-based suggestions and default popularity-based recommendations until enough data is gathered.

1. What evaluation metrics were most informative?

**Answer :** RMSE and Precision@k were especially useful for assessing accuracy and relevance.

1. How does the system prevent recommendation bias?

**Answer :** By combining content and collaborative filtering and limiting popularity dominance.

1. Is this system scalable to millions of users?

**Answer :** Yes, with optimizations like matrix factorization and model caching.

1. Can it work with real-time streaming data?

**Answer :** Yes, with modifications to incorporate batch or streaming data processing frameworks.

1. How are duplicate movies handled?

**Answer :** Deduplication is done during preprocessing using unique identifiers and metadata matching.

1. What algorithms were used and why?

**Answer :** SVD for collaborative filtering, TF-IDF for content filtering, and cosine similarity for measuring similarity.

1. What are the limitations of the MovieLens dataset?

**Answer :** It lacks demographic data and may not fully represent modern viewing habits.

1. Can the system provide explanations for its recommendations?

**Answer :** Yes, content-based filtering can provide traceable explanations (e.g., "similar genre or director").

1. How would you integrate this into a live content platform?

**Answer :** Through APIs that deliver model results, regularly updated with user interaction data.