

# Task 2: User Study Design for Guided Active Learning

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## 1 Introduction

This document proposes a user study to evaluate the effectiveness of providing feedback on rating impacts in a cold-start recommender system.

## 2 Hypothesis

The primary hypothesis is that users provided with explanations about how their ratings affect recommendations (experimental group) will exhibit more strategic rating behavior and higher satisfaction compared to a control group without explanations.

## 3 Study Design

The study employs a between-subjects design with two groups: - **Experimental Group**: Receives explanations with each movie rating. - **Control Group**: Rates movies without explanations. Participants rate 5-10 movies initially, receive recommendations, and complete a survey assessing satisfaction, ease, and (for experimental) transparency.

### 3.1 Procedure

1. **Recruitment**: Recruit 100 participants via university mailing lists and social media, targeting diverse age and movie-watching habits.
2. **Assignment**: Randomly assign participants to groups using a 50/50 split.
3. **Interaction**: Participants access the interface, rate movies, and receive recommendations.
4. **Survey**: Collect feedback via a post-interaction survey.
5. **Analysis**: Compare satisfaction and rating patterns using statistical tests (e.g., t-test).

## 4 Recruitment Process

Participants are invited through an online form, ensuring informed consent and data privacy compliance. Incentives include entry into a raffle for a *50giftcard*.

## **5 Expected Outcomes**

Anticipate higher engagement and satisfaction in the experimental group, validating the hypothesis.