

Assignment 2: Building a Recommender System

Theme: Recommender Systems (Collaborative, Content-based, Hybrid)

- **Objective:** Students will formulate their own recommendation problem and implement a system tailored to it.
- **Requirements:**
 1. **Literature Review** – Summarize 2–3 relevant papers on recommender systems (collaborative filtering, deep learning, hybrid methods).
 2. **Problem Definition** – Identify a domain where recommendation adds value (e.g., suggesting niche products, research papers, fitness plans, recipes, or even memes).
 3. **Approach Description** – Choose at least two recommendation strategies (baseline + one improved idea).
 4. **Experimentation** – Apply to a dataset (MovieLens, Goodreads, Amazon Reviews, Kaggle, or self-collected).
 5. **Analysis** – Compare performance across methods using precision@k, recall@k, MAP, NDCG, etc.
- **Open-ended twist:** Encourage students to create recommendation settings that aren't just movies/music — e.g., “recommend news articles that balance bias,” “recommend urban travel routes,” or “recommend coding resources.”

The deliverable for this assignment will be a report that details your experiments. The report should be in either **ACM or IEEE conference paper format.**

Links to format templates:

http://www.ieee.org/conferences_events/conferences/publishing/templates.html

<https://www.acm.org/publications/proceedings-template>