# Movie Recommendation System

This project is a simple content-based movie recommendation system using the MovieLens 100k dataset. It utilizes genre metadata to recommend similar movies based on user input.

## 📌 Project Overview

The system reads the MovieLens 100k dataset, processes the genre data for each movie, and uses TF-IDF and cosine similarity to compute movie-to-movie similarities.

## Key Features

- Content-based filtering using genre data

- Cosine similarity for recommendations

- Cleaned and structured data from the `u.item` file

- Simple user input to get top-N similar movie suggestions

## 🔧 Tech Stack

- Python  
- Pandas, NumPy  
- scikit-learn  
- Seaborn, Matplotlib  
- Jupyter Notebook

## 📁 Dataset

Dataset used: MovieLens 100k  
Link: https://grouplens.org/datasets/movielens/100k/

File used: `u.item`  
Contains movie metadata including title, release date, and genres

## 🚀 How to Run

1. Clone the repository or download the notebook.  
2. Ensure the MovieLens dataset is downloaded and path is correctly set in the notebook.  
3. Run the Jupyter Notebook:  
 jupyter notebook "Recommend system.ipynb"  
4. Enter a movie title to get similar recommendations.

## 📌 Example Output

Input movie: Toy Story (1995)  
Recommended movies:  
- Casper (1995)  
- Babe (1995)  
- Lion King, The (1994)

## ✨ Future Enhancements

- Add user-based collaborative filtering  
- Integrate ratings for hybrid recommendations  
- Web interface using Streamlit or Flask