**🎥 Movies Recommender System🎥**

| **Project Title** | **Movies Recommender system** |
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| **Technologies** | **ML, NLP, Recommender Systems** |
| **Domain** | **Entertainment** |
| **Project Difficulties Level** | **Advance** |

### About the Dataset:🎬

The dataset consists of metadata for all 45,000 movies listed in the Full MovieLens Dataset. The dataset consists of movies released on or before July 2017. Data points include cast, crew, plot keywords, budget, revenue, posters, release dates, languages, production companies, countries, TMDB vote counts and vote averages.

### Dataset:📂<https://www.kaggle.com/rounakbanik/movie-recommender-systems/data>

### Dataset Description: 📝

This dataset consists of the following files:

**movies\_metadata.csv:** The main Movies Metadata file. Contains information on 45,000 movies featured in the Full MovieLens dataset. Features include posters, backdrops, budget, revenue, release dates, languages, production countries and companies.

**keywords.csv:** Contains the movie plot keywords for our MovieLens movies. Available in the form of a stringified JSON Object.

**credits.csv:** Consists of Cast and Crew Information for all our movies. Available in the form of a stringified JSON Object.

**links.csv:** The file that contains the TMDB and IMDB IDs of all the movies featured in the Full MovieLens dataset.

**links\_small.csv:** Contains the TMDB and IMDB IDs of a small subset of 9,000 movies of the Full Dataset.

**ratings\_small.csv:** The subset of 100,000 ratings from 700 users on 9,000 movies.

### Problem Statement:❓

Using different techniques of Machine Learning, we need to build a Recommender System that recommends movies based on “ Cast, Genre, Reviews, TMDB/IMDB ratings”  
  
Using different types of recommendation techniques like:  
1. Popularity based recommender system  
2. Content based Recommender System  
3. Collaborative Recommender System

### Prerequisites required: 👩🏻‍💻

* Python Programming
* Basic Mathematics
* Machine Learning Algorithms - Like KNN, SVM
* NLP concepts like TF -IDF

### Technical Implementations: ✅

Machine Learning Algorithms  
NLP Techniques like TF-IDF  
Recommender System:

* Popularity
* Content
* Collaborative (User-Item based, Item-Item based)
* Hybrid model

### Real World Implementations: 🌍

These are few real world implementations that can be applied with the recommender system:  
1. Netflix  
2. Amazon Prime

3. Youtube Recommendations  
4. IMDB and many more applications

### Examples: 🎭 (Ideas for Future Scope)

Few other recommender systems that can be build are:

* E-Commerce (Clothing, Groceries,etc)
* Youtube Recommendations
* Spotify, Wynk music apps

### Tasks: 📝

1. Data Cleaning - Data Preprocessing
2. Exploratory Data Analysis  
   - Univariate Analysis  
   - Bivariate Analysis  
   - Multivariate Analysis
3. Data Visualization
4. Model Building  
    - Implementation of Machine Learning Algorithms (KNN, SVM)  
   - Implementation of TF-IDF
5. Generating a report on the different recommendation systems
6. Creating a proper document report on entire project
7. Future Scope on the project and further implementations (Different methodologies that can be used).
8. Deployment of the project.