INNOMATICS
RESEARCH LABS

Project Plan

Project:- Movie Recommendation System

Mentor:- Ramya Bhargavi

Team

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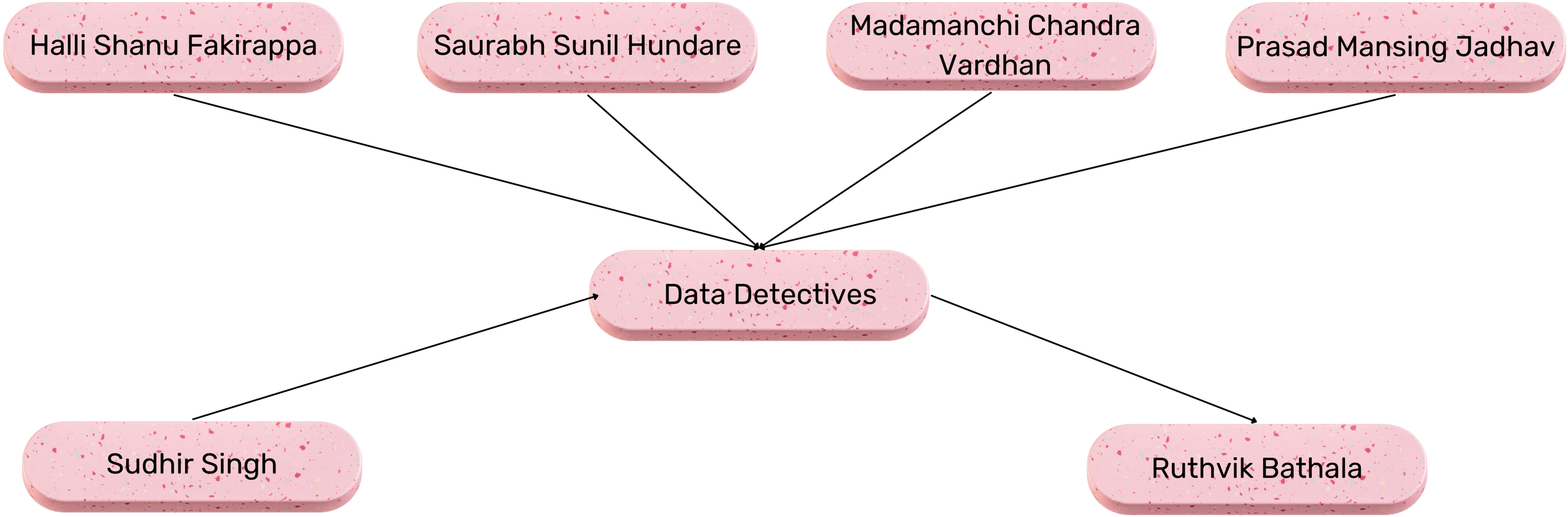
Team :- Data Detectives



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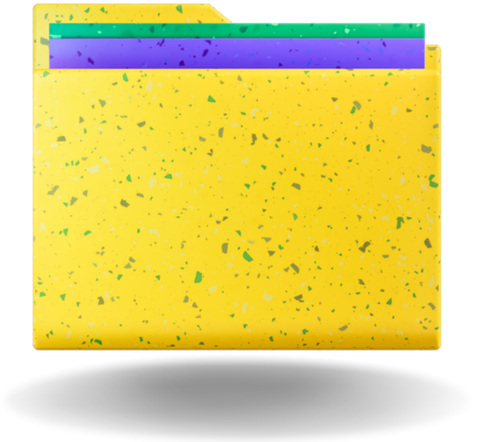
Overview



The rapid growth of digital media platforms and the availability of vast movie libraries have made it increasingly challenging for users to discover and choose movies that align with their preferences. To address this issue, movie recommendation systems have emerged as a powerful tool to enhance user experience and engagement in the entertainment industry.

OBJECTIVES

1. Enhance user satisfaction through personalized movie recommendations.
2. Enhance user retention by providing accurate and useful movie recommendations.
3. Personalize the movie-watching experience based on user preferences.

GOALS

To Make different types of recommendation techniques like:-

1. Popularity based recommender system
2. Content based Recommender System
3. Collaborative Recommender System

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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

Timeline

DATA CLEANING

Preparing a clean and reliable dataset for a movie recommendation system which is free of every kind of noise and false data.

EDA AND DATA VISUALIZATION

Exploratory data Analysis using Univariate, Bivariate, Multivariate Graphs and multiple Data Visualization Tools.

MODEL BUILDING

Implementation of Machine Learning Algorithms KNN and NLP Techniques like TF-IDF for Building a accurate model.

MODEL DEPLOYMENT

Deployment of the Model on the User's Site using Streamlit Framework.

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Literature survey

PAPER 1

Title:-

Toward the next generation of recommender systems: A survey of the state-of-the-art and possible extensions.

This survey paper provides a comprehensive overview of different recommendation techniques, including collaborative filtering, content-based filtering, and hybrid approaches, along with their strengths and limitations.

PAPER 2

Title:-

Hybrid recommender systems: Survey and experiments

The author presents a survey of hybrid recommender systems, which combine multiple techniques, such as collaborative filtering, content filtering to improve recommendation accuracy and coverage.

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Data Description

Datasets To be used:-

1.movies_metadata.csv

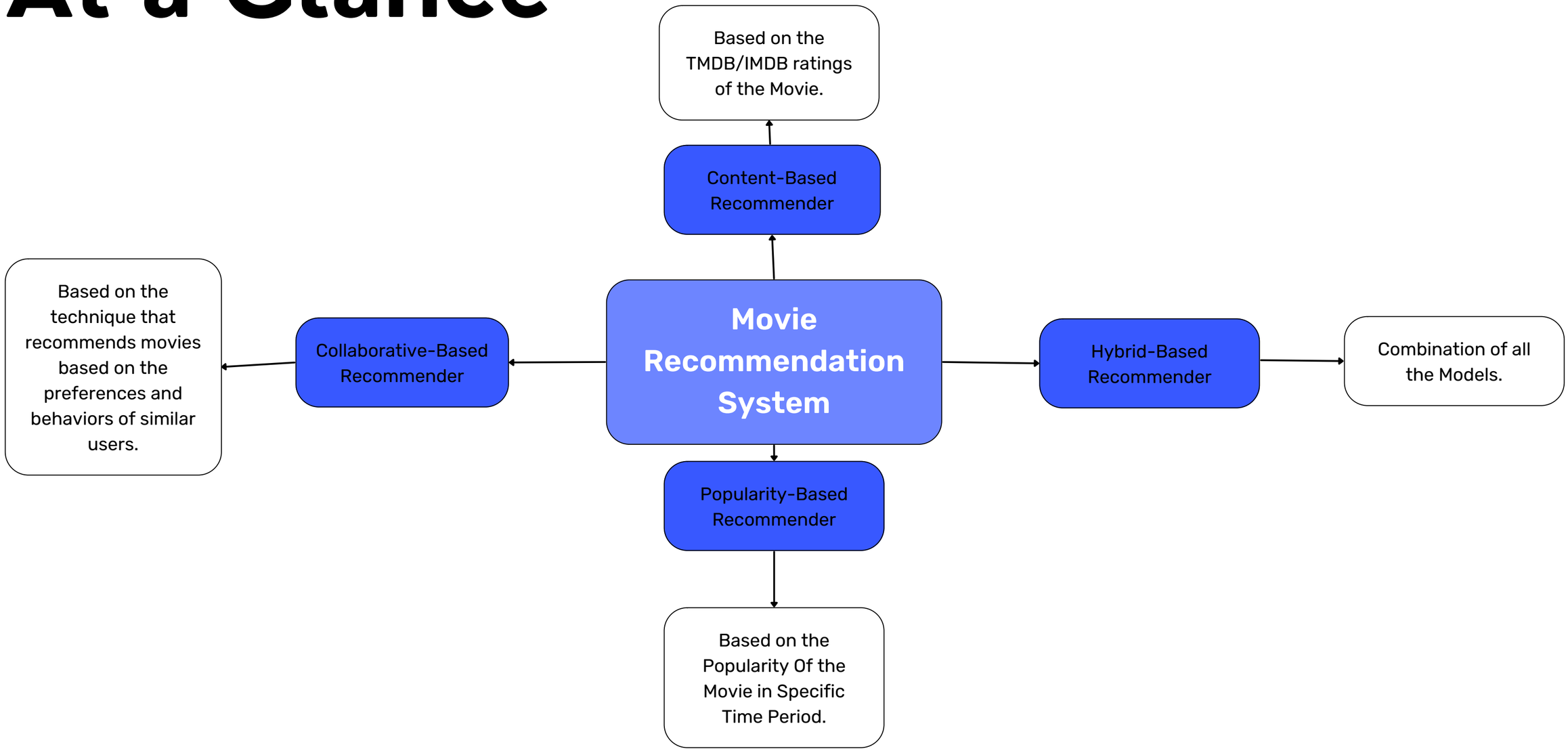
2. credits.csv

3.keyword.csv

4.ratings.csv

Important Column	Unnecessary Features	Numerical Features	Transformation Required
1 Genres	Home page	Revenue	Genres
2 - TMDB ID	Production countries	TMDB ID	Keywords
3 - Keywords	RunTime	Rating	Cast
4 - Title	Spoken language	Popularity	Crew
5 - overview	Video	Release date	Production Companies
6 - Cast	Budget		Overview
7 - Crew	Video		Title
8 - Resease Date			
9 - Revenue			
10 - Rating			
11 - Adult			
12 - Production companies			
13 - Popularity			
14 - Postar Path			
15 - Status			

At a Glance



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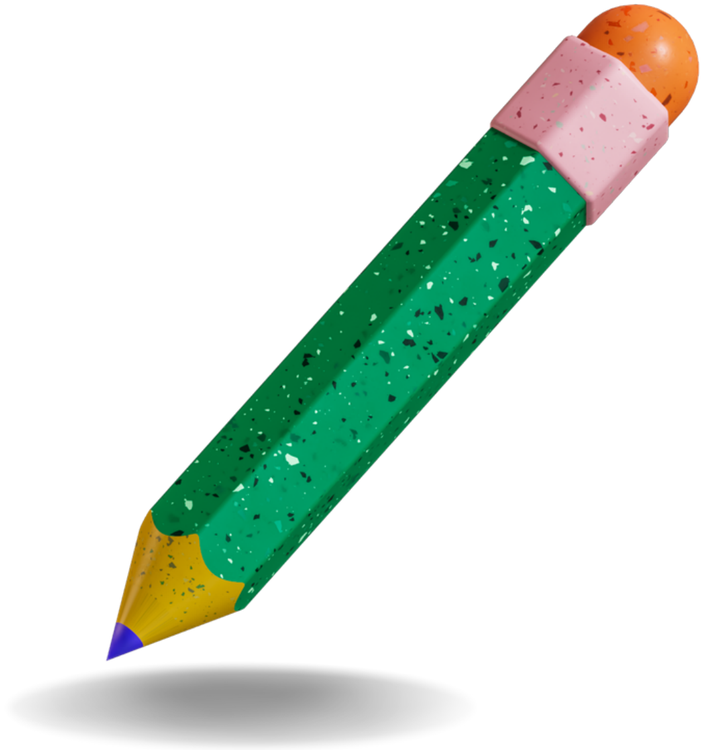

Technologies

LANGUAGES USED:-

Python

ALGORITHMS:-

- SVM(Support Vector Machines)
- NLP concepts like TF -IDF

FRAMEWORK:-

- Streamlit
- Natural language Processing

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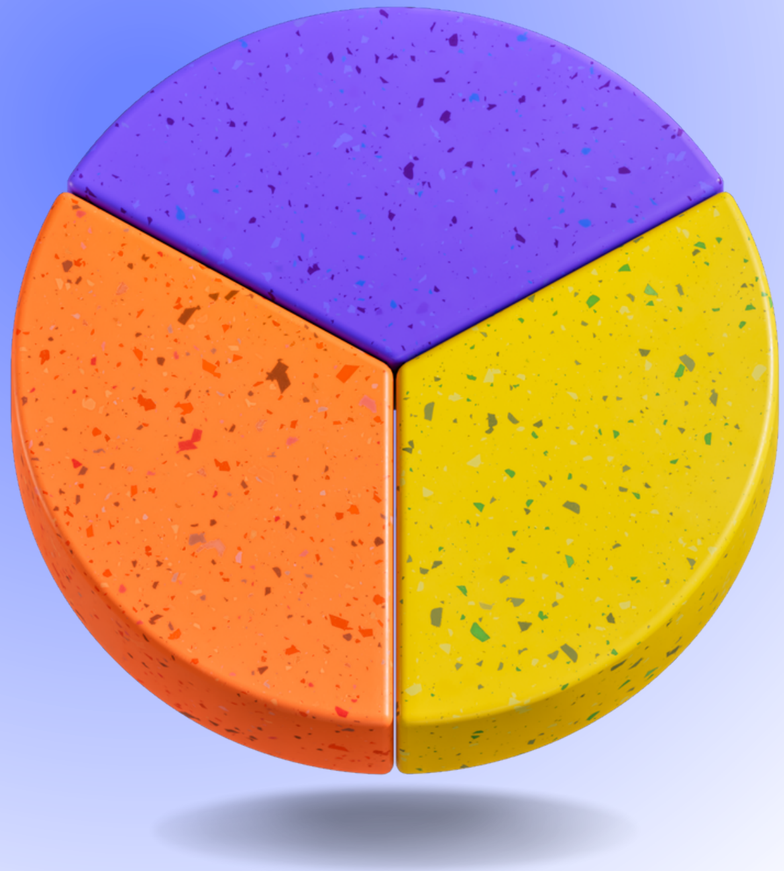

References

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- https://www.kaggle.com/code/rounakbanik/movie-recommender-systems/notebook

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THANKYOU