**Project Brief: Movie recommendation system**

**Project Overview:**

Develop a movie recommendation system that provides users (movie enthusiasts) with tailored movie suggestions based on their preferences, viewing history, and user behavior patterns.

**Key Features:**

Deliver personalized movie recommendations

User Registration and Authentication:

* Allow users to create accounts and log in securely.

Search options:

* Allow users to refine recommendations by name

**Additional features:**

User Profile Management

* Users should be able to set up profiles with basic information (e.g., name, profile picture, preferences, list of favourites)

Filter Options:

* Allow users to customize recommendations by genre, actor

User Feedback:

* Allow user to save movie or give like/dislike

**Timeline**

**The Initiation and Planning phase** 09/24 -10/24

Requirement gathering

Planning technical stack and project design

**The Execute phase** 10/24 – 03/25

Frontend and backend integration

Frontend Development

* Build core UI components and navigation.
* Implement user interaction features (e.g., ratings, search).

Database Development

* Design database schema for storing user and movie data.
* Implement data ingestion pipelines for movie metadata and user behavior logs.

Model development and initial testing

* Develop and test recommendation model

Frontend and Backend Integration

* Connect UI components to APIs for real-time recommendations.
* Enable feedback loop functionality to refine recommendations.

User feedback collection

Deployment and scalability testing

**The Close phase** 04/2025

Final testing and quality assurance

Review project deliverables

Evaluate project quality

**Milestones:**

Data Quality: Ensure data consistency for reliable recommendations.

Model Complexity: Balance model accuracy with performance.

API Integration: Connect the frontend with the backend to fetch recommendations.

Model deployment: Deploy the trained ML model on a server

Testing: Ensure the entire flow works

**Technologies:**

Front-end: React.js

Back-end: Python: Flask

Database: SQLAlchemy/SQLite3

Testing: jest and pytest