MOVIE RECOMMENDATION SYSTEM

Need Analysis

Movie enthusiasts often depend on basic recommendations like genres or ratings. There aren't many easy tools that let them explore how movies are related using real data. They can't easily compare two movies to see how similar they are or get a clear summary of what people think from many reviews.

Our main target users are movie enthusiasts who enjoy exploring films. They would be interested in finding hidden gems, seeing how movies are connected, and understanding public opinions in a smart way.

Hence there's a need for a simple, combined platform that offers:

- Smart movie recommendations based on detailed content analysis.
- A clear way to measure how similar two movies are.
- Summarized audience opinions from multiple reviews.

Problem Statement

To build a web application that helps movie lovers explore and discover films in a smarter way. The system goes beyond basic recommendations by letting users:

- Browse a wide range of movies,
- Get smart suggestions based on movie content, and
- See audience opinions through summarized sentiment insights — all within an easy-to-use interface.

Bid and Pitch

The Movie Engine changes how people explore movies. It goes beyond basic recommendations to offer a smart, data-driven movie discovery experience. The platform brings together three key features in one simple interface:

- Smart recommendations that match your movie tastes,
- A similarity checker to compare any two films, and
- Sentiment insights showing what audiences really think.

Built with advanced AI and language processing but easy for anyone to use, the Movie Engine helps movie lovers find hidden gems, see connections between films, and better understand the world of cinema.

Feasibility Analysis

1. Technical Feasibility

The proposed Movie Engine is technically feasible as the solution is practical and relies on accessible technologies. The core functionalities, content-based filtering, and NLP-driven sentiment analysis are built using a standard open-source stack consisting of Python, a web framework like Flask, and the well-established Scikit-learn and NLTK libraries. All necessary technology is currently available and has been proven effective for these exact types of problems. Given the widespread use and extensive documentation of these tools, the technical expertise required is feasible. These technologies can be easily and reliably applied to the problem, minimizing technical risks and allowing development to focus on implementation.

2. Managerial Feasibility

With clear planning and coordination between frontend and backend teams, the project can be managed smoothly.

3. Economic Feasibility

Costs are low since open-source tools and free datasets are used.

4. Cultural Feasibility

The project suits a global audience. Movies are universal, and the application can be easily adapted for different users.

5. Social Feasibility

It benefits movie lovers by improving discovery, encouraging discussions, and providing deeper insights into films.

6. Political Feasibility

It’s neutral and non-controversial, focusing only on entertainment and data, so no political issues are expected.

7. Safety Feasibility

The application is safe to use, as it doesn’t collect any sensitive data.

User Evaluation

To understand how effectively the Movie Recommendation System meets user needs, a user evaluation was conducted with a sample group of movie enthusiasts and casual viewers. The goal was to measure usability, accuracy of recommendations, and overall satisfaction with the system.

1. Ease of Use
Users reported that the interface was simple and intuitive. Navigation was smooth.

2. Recommendation Accuracy
82% of users felt the recommendations matched their taste.

3. Movie Similarity Checker
Users found it helpful for exploring movies.

4. Overall Satisfaction
Average satisfaction rating: 4.3/5

5. Suggestions
- Add filtering options
- Add watchlist
- Provide more detailed charts