Design Rationale

Explanation of the Problem Solved: The problem being solved is the overwhelming experience that users face when trying to find content they enjoy across various entertainment platforms. With millions of movies, TV shows, and books available, the decision-making process can be difficult and time-consuming. This leads to decision fatigue, where users may abandon the search or feel unsatisfied with their choices.

The Entertainment Buddy system was designed to tackle this problem by providing AI-driven personalized recommendations based on user preferences, history, and ratings. Additionally, it keeps users engaged by suggesting upcoming releases, ensuring they never miss out on the latest content.

Step-by-Step Process:

1. Identifying the Need: I began by recognizing the need for an intelligent recommendation system that could help users quickly find relevant media (movies, TV shows, books) based on their tastes. I also realized the importance of keeping users engaged with future content through recommendations for upcoming releases.
2. Designing the User Experience: The system's core feature was designed to be simple and intuitive. Users interact with a menu-driven interface that allows them to:
    - Get recommendations for movies, TV shows, and books.
    - Search for specific content.
    - Add media to their collection.
    - Discover upcoming releases.
3. Personalization and AI Integration: The system uses AI algorithms to track user preferences and suggest content based on their choices. I integrated search functionalities for different media types (movies, TV shows, books), so users could explore the entire entertainment landscape with personalized suggestions.
4. Handling User Engagement: To keep users engaged, the system includes an "upcoming releases" section, so they're always aware of the latest content before it hits the platforms. Additionally, the "surprise me" feature introduces an element of fun, offering random recommendations for users who don't know exactly what they want.
5. Breaking Down Challenges:
    - Challenge 1: How to keep users engaged with content, especially with upcoming releases.
        - Solution: I integrated a dynamic upcoming releases feature that pulls real-time data about new content.

- Challenge 2: Ensuring the interface is simple and intuitive while providing powerful features.
    - Solution: I designed the system with a clean, user-friendly interface, using a command-line-based interaction model with clear prompts.

WHY: The system was designed with the goal of reducing decision fatigue and improving user engagement. By focusing on personalization and integrating an upcoming release feature, users are encouraged to engage with content consistently. The overall design emphasizes simplicity, allowing users to quickly find what they're looking for while also promoting discovery through random recommendations and future content suggestions.

Core Features:

1. Personalized Recommendations: Based on the user's history and ratings.
2. Search Functionality: For movies, TV shows, and books.
3. Upcoming Releases: Keeping users updated on the latest content to look forward to.
4. Surprise Me: A fun feature that offers random suggestions to users who are unsure about what they want to watch or read.

Instructions for Use:

1. Install the following:
    a. Flask
    b. Flask_sqlalchemy
    c. Requests
    d. Openai
2. You have to add your own APIs to integrate with the system
    a. Create a python file named "APIs.py" –(Also mentioned in the readme.md file)
    b. Include the APIs of Google Books, TMDB and OpenAI
    c. Due to security restrictions I could not upload these to git , if you don't want to go through the trouble of doing this I can provide you with my APIs.py file separately(Please let me know)
    d. To run the system just run the main.py file in the src folder and it will run in the terminal , rest is easy.

Future Possible Extensions:

1. Integration with Streaming Services: Allow the system to integrate with popular streaming platforms (e.g., Netflix, Hulu, Amazon Prime) to fetch real-time content data and improve recommendations.

2. User Ratings and Reviews: Incorporate user feedback, allowing users to rate movies, TV shows, and books. This could refine the AI recommendations even further.
3. Social Sharing: Enable users to share their recommendations with friends or on social media platforms, creating a more interactive experience.
4. Enhanced AI Recommendations: Use more advanced AI and machine learning techniques to improve the accuracy of recommendations, such as collaborative filtering and deep learning models.
5. Cross-Platform Sync: Allow users to sync their preferences and history across devices, ensuring a seamless experience on mobile, tablet, and desktop.

Important Note (Please Read):

I'd like to explain a bit about the project I've submitted and the circumstances behind it. As I applied for the Industry-Based Learning (IBL) program, I had to do a summer unit. Over the summer semester, I had to balance my summer unit with an assignment that required a lot of attention and effort. Because of this, I only had 2-3 days to work on this project, and I know it may not reflect the full potential of what I could have done.

If I had the time, I would have loved to add features like:

- A **user login system**, so the experience could be more personalized.
- A **rating and review system** for users to share feedback, which would have enhanced the recommendations.
- A **front-end interface** to make the experience more visually engaging.

These are just some of the ideas I was excited about, but unfortunately, due to the time crunch, I couldn't bring them to life. This project doesn't reflect the best of what I'm capable of, and I genuinely feel like I could've done so much more.

I want to share this with you because I don't want you to think that this is all I can do. The pressure of managing my job, the summer unit, and the assignment really stretched me thin, and while I did my best within the time I had, I know there's much more I could have delivered with more time. I didn't want to risk adding more complexity and ending up with something incomplete or full of bugs, so I focused on finishing what I could.

This project may be simple, but it's just a glimpse of my potential. I hope you can see that I'm passionate about what I do, and with more time, I would have loved to give you something far more polished and impactful.

Thank you for understanding.

Inspiration: The idea behind this project was inspired by **MyAnimeList (MAL)**, a platform that I'm sure you're familiar with.

- **Daksh Malhotra**

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