BingeBuddy

Lab 1/2 Outline

By: Joanna Graphman, William Ward, Hannah Dietrich, Todd Beatty

Instructor: Tom Valva

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1. Introduction

The exponential growth of streaming platforms has created a new form of cognitive overload for consumers. Today, there are over 200 streaming platforms worldwide, with more than 500 original TV shows and movies released in 2020 alone (Pangarkar). As entertainment content continues to multiply, individuals struggle to manage new episode releases, maintain organized watchlists, and remember which platform hosts specific content. The issue only continues to grow as more shows and movies are released to the public without a centralized system to organize and manage them.

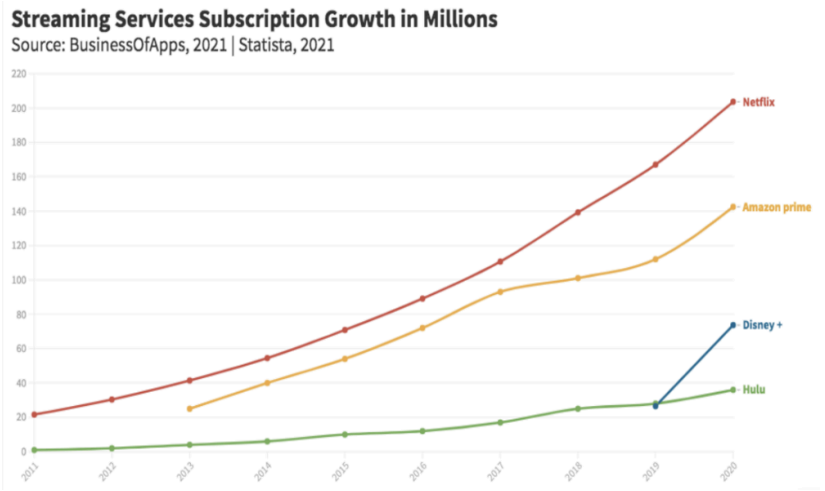

Figure 1

https://amt-lab.org/blog/2021/11/streaming-service-algorithms-are-biased-and-directly-affect-content-development

A viable solution to this problem is a user-friendly system capable of integrating content across multiple platforms while providing features such as episode organization, subscription viewing, and content tracking. This would address both the functional need to manage streaming content and the burden of wasting time and trying to find an episode or even potentially missing out.

BingeBuddy is proposed as an innovative solution to this growing challenge. BingeBuddy is created as a cross-platform media management application in order to help users effectively organize and

monitor their streaming activity. Through personalized recommendations, intuitive organization tools, and cross-platform tracking, BingeBuddy aims to simplify the streaming experience and return control to the viewer. It offers innovative AI technology in its use of a personal AI assistant, BingeBuddy chatbot. The app will have the potential to become an essential tool for entertainment consumers throughout the world where it will solve the widespread issue of unnecessary platform disorganization and confusion.

Tools, and 2. X Product Description

BingeBuddy is a cross-platform streaming service helper application designed to help users organize, track, and personalize their media and entertainment experience across multiple streaming services. As entertainment continuously comes out with new films, programs, series and more it becomes increasingly fragmented and overwhelming for consumers. BingeBuddy provides a centralized space where thousands of users can manage their watchlists and receive notifications about new episode releases and keep track of which shows and movies are available on which platforms. It provides AI technology to help users navigate the app. Its core objectives include simplifying content discovery, improving watchlist management, decreasing time wasted in searching for content, and ultimately enhancing the overall streaming experience for all users.

2.1. Key Product Features and Capabilities

BingeBuddy provides a platform for users to receive recommendations for TV shows and movies based on user data. It displays a user's streaming services that they are logged into and the current shows watched on all the platforms. It integrates these streaming services into one application so that users can easily see the shows across the streaming services without needing to log into each one separately. BingeBuddy allows users to bookmark shows so they are able to track them to stay updated on new seasons, episodes, and releases. It shows which streaming service each show is on so that the user does not have to search each streaming

service individually for a specific show. In addition, Bingebuddy offers a BingeBuddy chatbot, which allows users to interact in a chatbox with an AI program. This program is not a live AI chat and does not collect sensitive information. BingeBuddy does not allow users to stream shows on the app so nothing is illegal or pirated. Instead, it provides links to shows on streaming services for easy finding.

BingeBuddy has unique features that make it innovative in the market due to its ability to provide multiple services not offered by other apps. One of the most innovative features it offers is an interactive AI chatbot. This AI chatbot responds to chat prompts by the user. It helps the user find specific shows, takes them to watchlists, and answers questions. Another significant feature BingeBuddy offers is cross-platform syncing, which is vital to the app's ability to provide custom user-curated lists, price-tracking for movie rentals, and new episode notifications. The software is significant because it vastly cuts down on time spent searching through streaming services.

Through these innovations, BingeBuddy is able to accomplish the needed task of providing a seamless streaming experience to users. Users are able to view all of their subscriptions in one platform that not only makes it easier to find shows but also conveniently organizes subscribed streaming services so users can see what streaming services have the shows they are interested in. This solves the problem of an overwhelming amount of shows and movies to keep track of and find.

2.2. Major Components (Hardware/Software)

BingeBuddy will be developed as a mobile application with web-based support. The required hardware needed to support BingeBuddy will include devices such as smartphones, tablets, and personal computers with internet access. These devices will serve as the primary interface between users and the application. The backend services will be hosted on cloud infrastructure, which will allow for scalable data storage, account management, and streaming service integration.

The software architecture includes both client-side and server-side components. The client application will be developed using a cross-platform framework such as React Native to support iOS and Android devices efficiently. Core features will be delivered through a responsive user interface that handles the watchlists, content tracking, and notifications. The backend will be developed using Python or Node.js that will be connected to a NoSQL database for storing user data, media preferences, and streaming platform data. Integration with third-party APIs will enable real time updates on streaming availability and content releases. The system will also include authentication services, analytics tracking, and a basic recommendation engine driven by user preferences and historical data.

In the diagram below, the system begins with Users accessing the app through client devices (smartphones, tablets, or web browsers). Requests are routed through a load balancer and API Gateway, which manage traffic flow and direct it securely to the appropriate service. An authentication Service handles user logins, session management and access control. The application supports external integrations with third-party APIs, routed through the gateway as well. Once validated, requests are processed by the microservices architecture, which divides the system's functionality into distinct, loosely coupled services. This includes the Library API service, App Logic Service, Recommendation Engine Service, and the AI ChatBot. These services interact with a Caching Layer to improve performance and minimize database load. Persistent data is stored in a central database, while usage metrics and health indicators are routed to an Analytics & Monitoring module for system diagnostics and user insight. This

modular and container-friendly structure ensures BingeBuddy is both scalable and adaptable, capable of serving a growing user base without compromising speed or reliability.

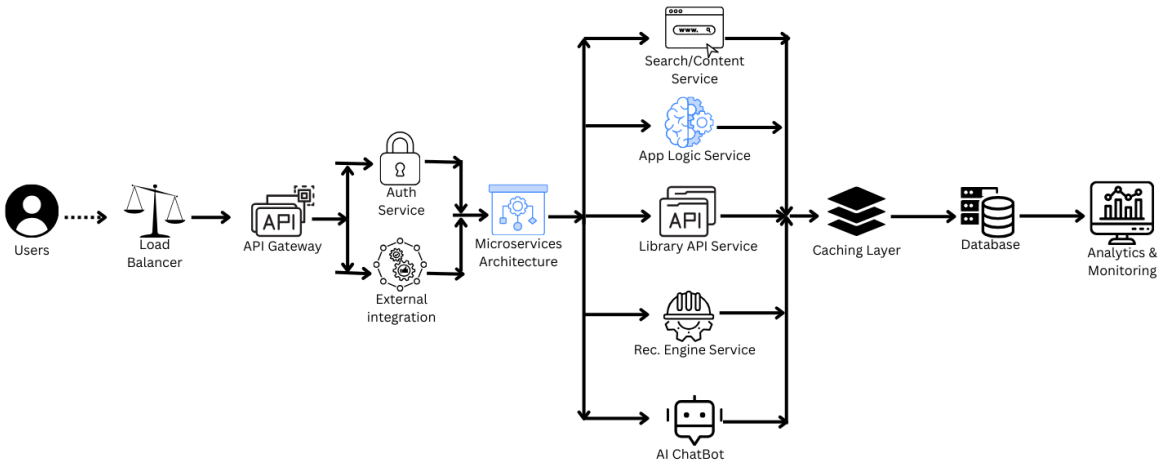

Figure 2

3. Identification of Case Study

BingeBuddy is being developed for consumers who actively use multiple streaming services such as Netflix, Disney+, Prime Video, Hulu, and many others. The primary focus is on users between the ages 18-35 who frequently consume content and experience frustration of managing their watchlists, remembering release dates and switching between platforms. These users tend to be more tech savvy but can sometimes be overwhelmed by the volume of content and lack of centralized management tools. BingeBuddy addresses their need for an organized and seamless experience. BingeBuddy includes a MoodBot AI feature that is designed for users who value emotional personalization. This would include comfort content, mood specific recommendations, or a lighter interactive touch to be a part of the users' entertainment experience.

In the future, BingeBuddy may also serve a broader audience, including families that want to manage content across household members, older users who prefer a simplified interface, and content

creators or influencers who track media trends and releases. Additionally, the platform could support accessibility features and multilingual options, making it more inclusive for international users and many others.

4. Glossary

API (Application Programming Interface): Set of tools & protocols that allows different software applications to communicate with each other.

App Logic Service: handles core application behavior and coordinates workflows between components.

Backend: The server-side part of the application that is responsible for data processing, business logic, and database interactions.

Cross-Platform: Software that is compatible with multiple operating systems, such as Android, iOS, and web browsers.

Library API Service: Manages user media libraries, watchlists, and saved items.

Recommendation Engine Service: leverages usage data and preferences to suggest relevant content.

Search/Content Service: enables dynamic searching and browsing across platforms.

Streaming Platform: A service that delivers media content such as TV shows or movies over the internet for instance Netflix, Hulu and Disney+.

UI (User Interface): The visual layout and interactive elements of an application that users engage with.

UX (User Experience): The overall experience a user has while interacting with a product including the ease of use, satisfaction, and accessibility.

Watchlist: A personalized list of media content that a user intends to watch, typically organized by platform or preference.

5. References

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