

# Research Platform for Supporting Global Fans during K-pop Live-streaming

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## Motivations

- Project Goals:** Develop a proof-of-concept live-streaming platform tailored for global K-pop fans, to serve as a tool for future research on user interaction, engagement, and behaviour during live-streams, that enables highly active participation of K-pop fans.
- Why K-pop?** It's a global, highly engaged fanbase that thrives on community and interaction, making it ideal for exploring specialized live-streaming features.
- Why Not Just YouTube?** It lacks the specialized features K-pop fans crave, such as tailored chat systems, fan interactions, and personalized live-stream experiences.

## Methodology

- Research & Planning:**
  - Gathered user insights through surveys and interviews.
  - Analyzed platforms like FreeTube, WeVerse, and VLive to identify gaps.
  - Prioritized features based on research and designed wireframes for the platform.
- Prototyping & Development:**
  - Built a responsive front-end with React, incorporating live chat and video features using YouTube APIs.
  - Set up Firebase for user authentication and real-time data management.
- Collaboration & Iteration:**
  - Based on input from continuous feedback, developed the platform from collaborators, refining features and design

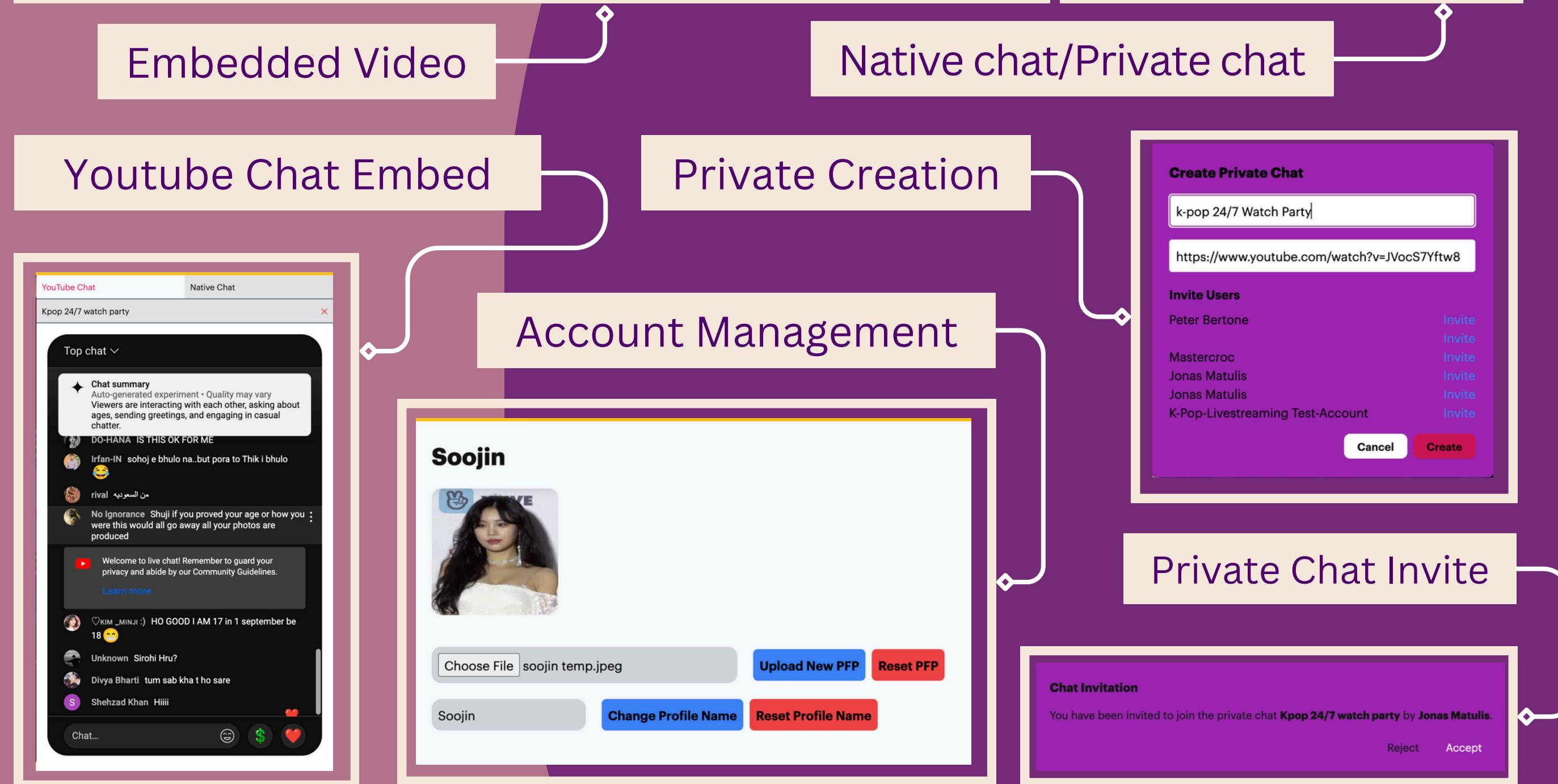
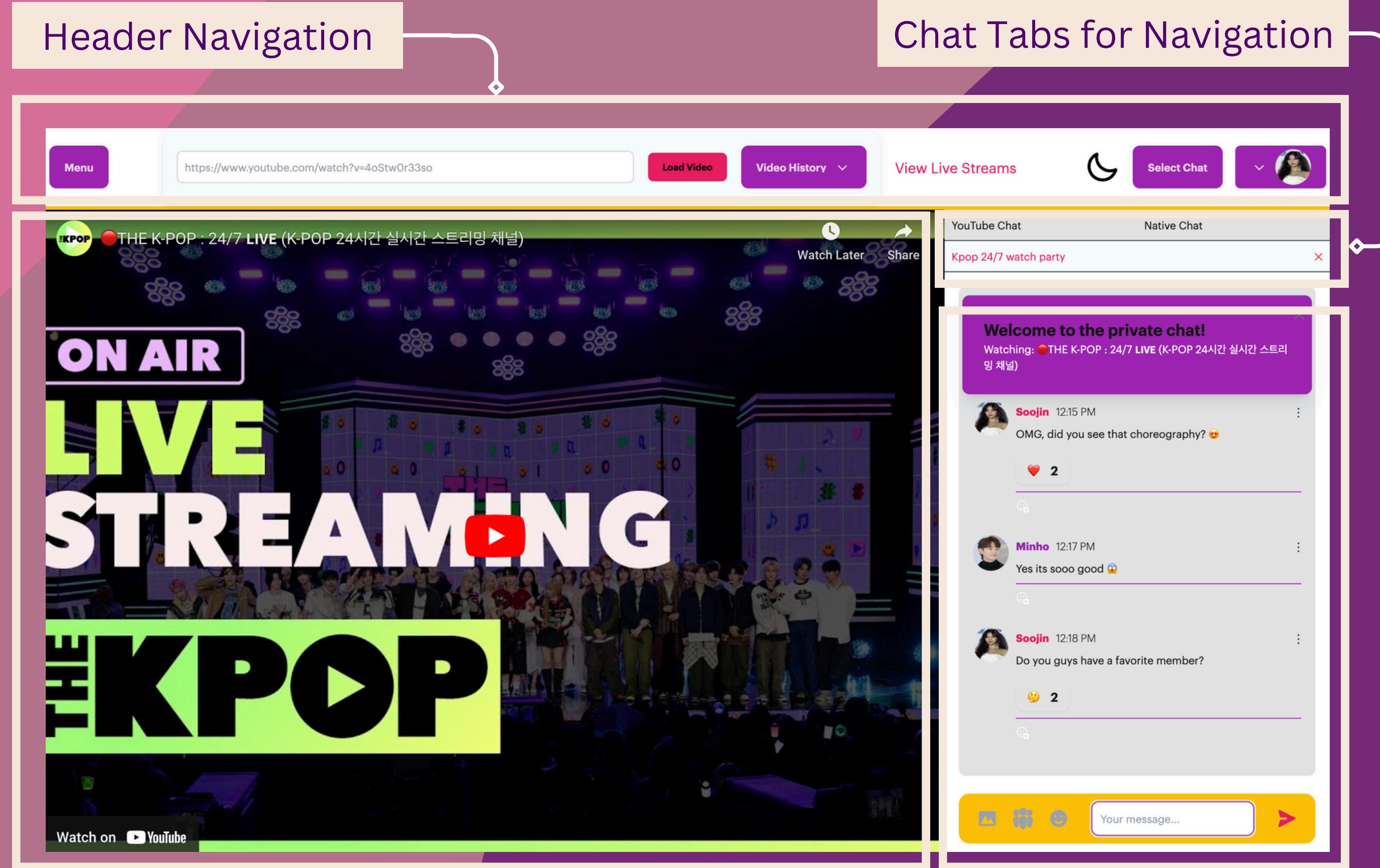
## Technical Challenges

- YouTube API Quotas:** Faced restrictions with YouTube's API, necessitating a re-evaluation of our approach to maintain a smooth user experience.
- Google OAuth2.0:** Overcoming the technical challenge of integrating Google OAuth2.0 involved ensuring secure authentication while managing complex token exchanges and API requests to provide seamless user access.

Funded by the President's Summer Co-op Initiative!

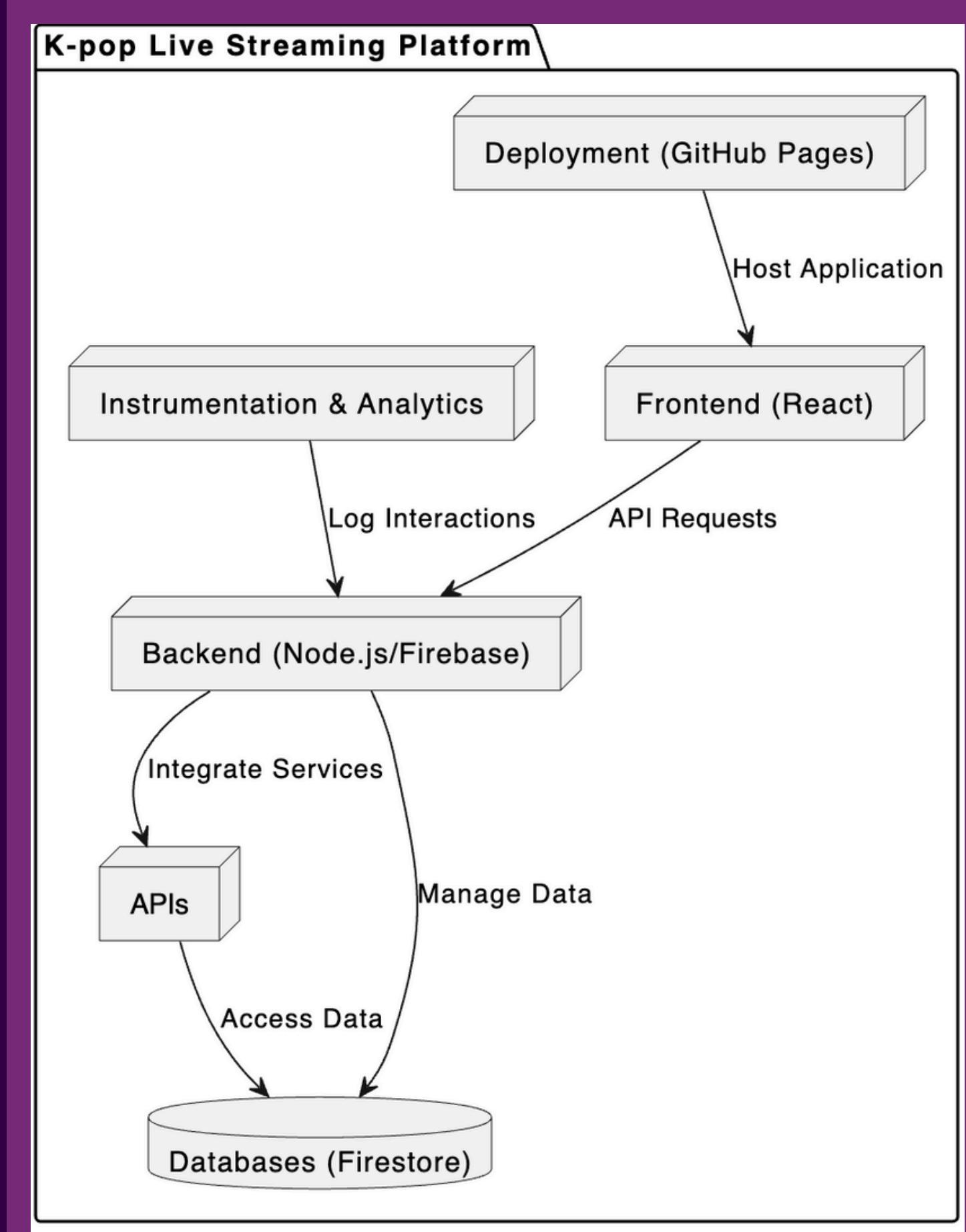
## Key Features Developed

- Live Chat:** A native chat feature that integrates with YouTube Live Chat, allowing users to switch between platforms seamlessly.
- Private Chat:** Create and join private chat rooms with selected members, facilitating more focused and personal interactions.
- Loading Live-streams:** Load live streams dynamically, allowing users to watch their favourite K-pop artists live with just a few clicks.
- Accounts:** Utilized Firebase for managing user accounts, including customizable profiles, and personalized user experiences through saved preferences.
- Database:** Firebase is the primary database, efficiently handling user authentication, data storage, and real-time interactions.
- Instrumentation:** Implemented Firebase-based tracking to log user interactions, providing essential data for optimizing the platform for K-pop fans.



## Technology

- React.js:** Built the dynamic and responsive user interface.
- Node.js:** Server-side logic, handling API requests, and real-time features.
- GitHub Pages:** Hosts the project.
- Firebase:** Backend services, including user authentication, real-time database management, and cloud functions.
- Tailwind CSS & DaisyUI:** Rapid, responsive design with customizable UI components.



## Implications

- Provide insights into how strong parasocial relationships affect digital engagement and user behaviour in online communities.
- By analyzing K-pop fan interactions, increase understanding of the emotional drivers of content consumption and fan participation, and discover potential trends to strengthen digital engagement strategies.
- The data will develop more tailored and engaging user experiences, allowing platforms to focus features and content toward particular audiences.

## Next Steps

- User testing and user research on the prototype.
- Shareable links to live-streaming content.
- More accessibility, and mobile device support.
- New way to load YouTube videos, besides the URL (such as using the YouTube Data API to load subscriptions).
- AI chat and video language translations, and fan-subbing to live-streams.



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