

Seminar Project

CONVOIQ

Social Networking Platform with
Interest-Based Matching

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INTRODUCTION

➤ **Purpose:**

Connect individuals based on shared interests, gender, and age preferences.

➤ **Main Goal:**

Foster meaningful interactions through real-time chat functionality.

Provide personalized profile-based search filters.

➤ **Technology:**

Uses interest-based algorithms to improve the match-making process.

➤ **User Experience:**

Aims to create a dynamic and engaging user experience.

Focuses on forming genuine relationships, moving beyond superficial connections.



OBJECTIVES

- Create a platform that helps users connect based on common interests, gender, and age preferences.
- Integrate real-time messaging using Web Sockets to allow instantaneous communication.
- Ensure data security and user privacy by implementing encryption and safe login mechanisms.
- Provide a seamless user interface with dynamic search filters for personalized results.
- Support user interaction analysis to improve matchmaking accuracy and enhance communication over time.



FEATURES

➤ **User Registration & Authentication:**

Secure user sign-up and login, with session management using Flask-Login.

➤ **Profile Management:**

Users can update their profile with a picture, bio, and interests, improving matchmaking accuracy.

➤ **Search Functionality:**

A dynamic search feature that allows users to filter by interests, gender, and age.

➤ **Real-Time Chat:**

Integrated real-time messaging powered by Flask-SocketIO, enabling users to send and receive messages instantly.

➤ **Message Persistence:**

All messages are stored in the database, allowing users to view chat history.

➤ **User Interaction Analysis:**

Future updates will include analyzing chat data for user behavior insights and better matchmaking.

TECH STACK



Category	Technology	Purpose
Frontend	HTML5 & CSS3	Structure and styling of the web application
	JavaScript	Handles dynamic behaviors and interactions (e.g., form validation, search)
	Jinja2	Flask's templating engine for dynamic content rendering
Backend	Python	Server-side logic and API handling
	Flask	Web framework for routing, request handling, and session management
	Flask-SocketIO	Real-time messaging with WebSockets
	Flask-Login	User authentication and session management
	Flask-Bcrypt	Password hashing for security
Database	SQLite	Development database
	PostgreSQL/MySQL	Production deployment database
Hosting	Heroku/Render	Hosting and deployment platform for the application

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LOGIN / SIGN-UP PAGE

Sign-Up Section:

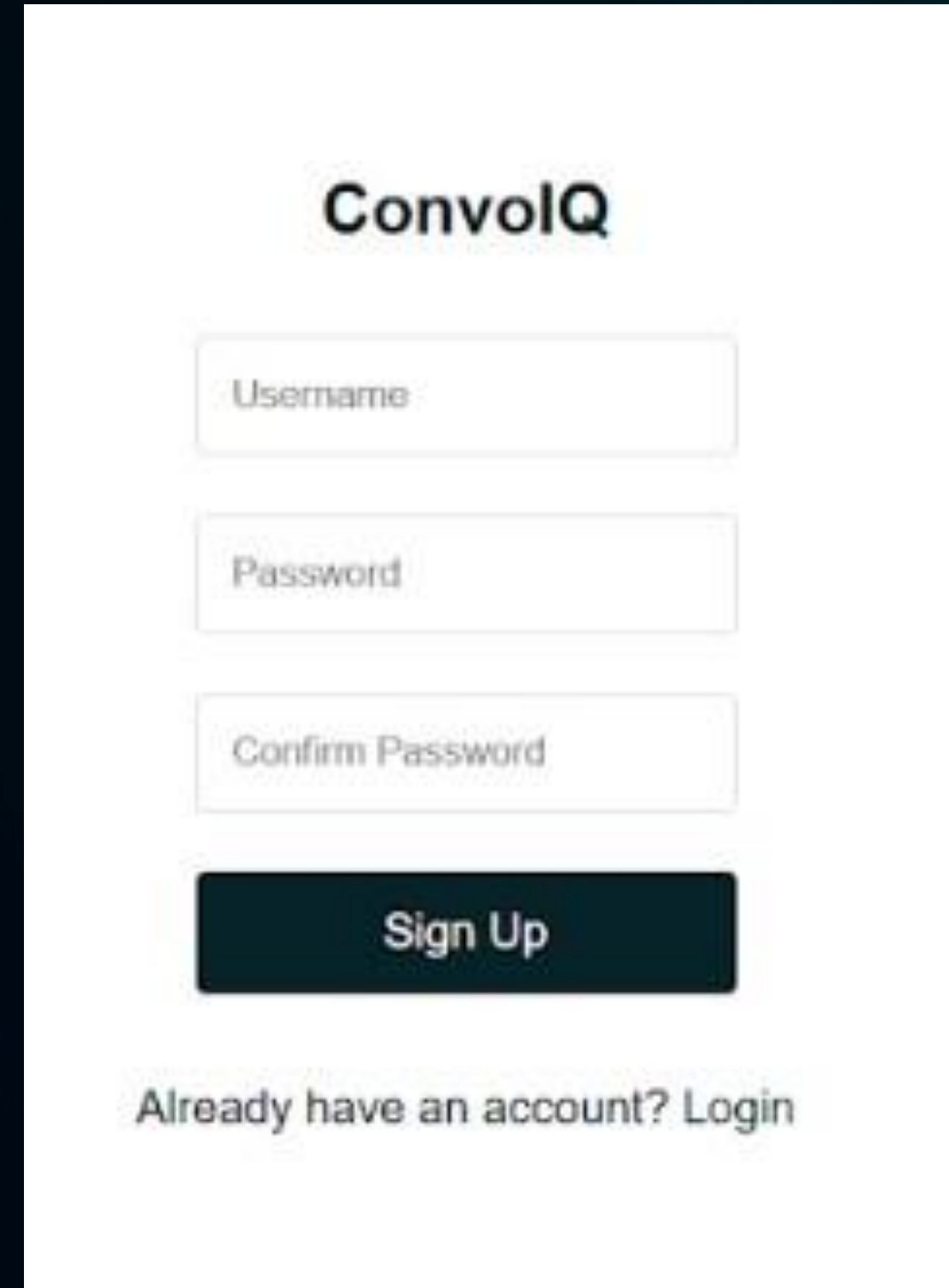
New users can create an account by providing their email, username, and password. Password requirement: Minimum 8 characters for security. Option to upload a profile picture during registration.

Login Section:

Existing users can log in by entering their email and password. A friendly line — "Already have an account? Login" — is shown to guide users between sign up and login easily.

User Flow:

After signing up or logging in successfully, users are redirected to the dashboard.



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Username

Password

Confirm Password

Sign Up

Already have an account? Login

Edit Profile

Bio:

Hey, I love pandas!

Gender:

Male

Age Group:

18-24

Interests (comma-separated or click to add):

Type and press Enter to add

AI ✕

Gaming ✕

Music ✕

Travel ✕

AI

Movies

Books

Gaming

Coding

Music

Travel

Profile Picture:

Choose File Screenshot 2025-04-25 173220.png

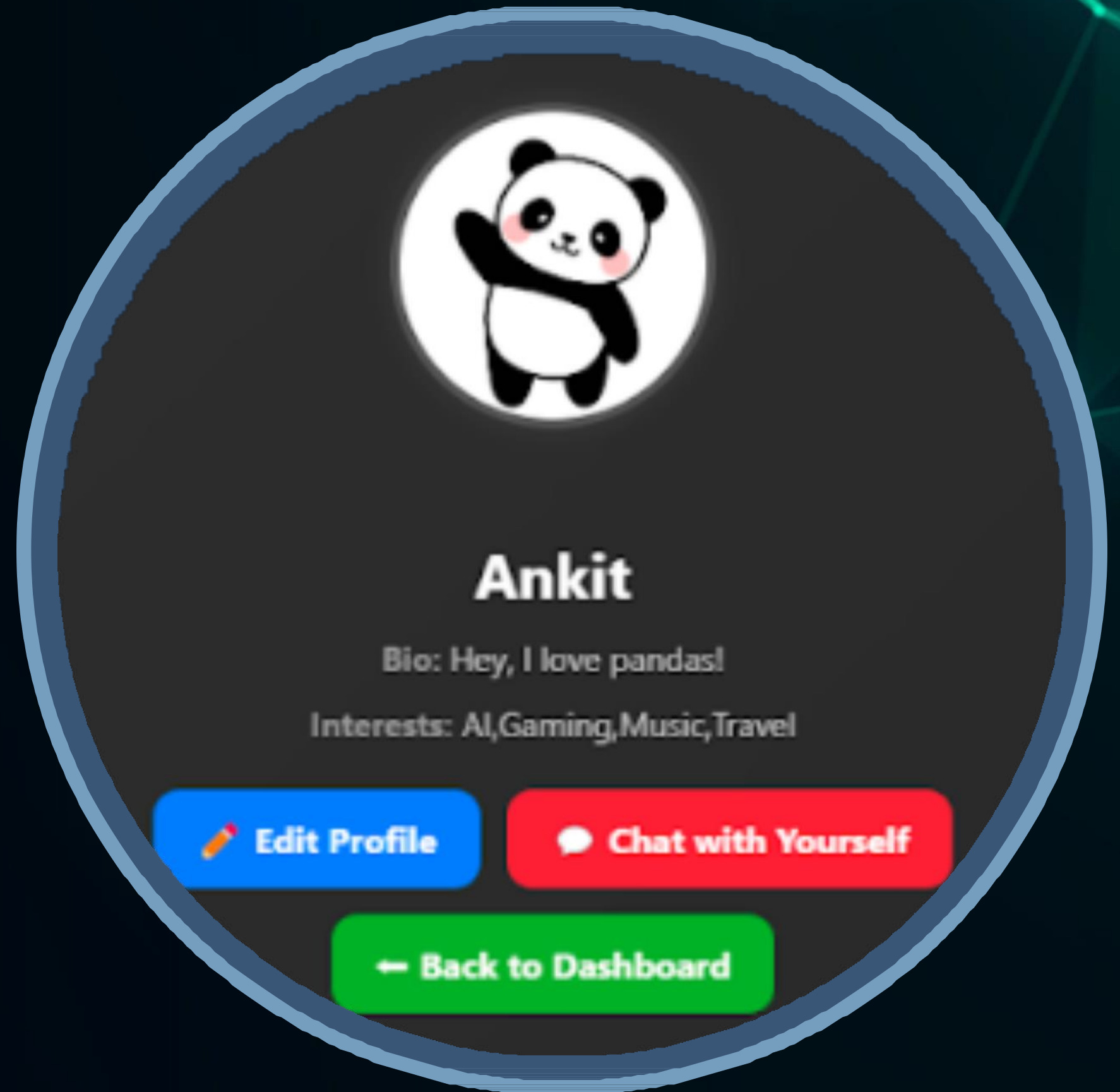
Save Changes

EDIT PROFILE / VIEW PROFILE

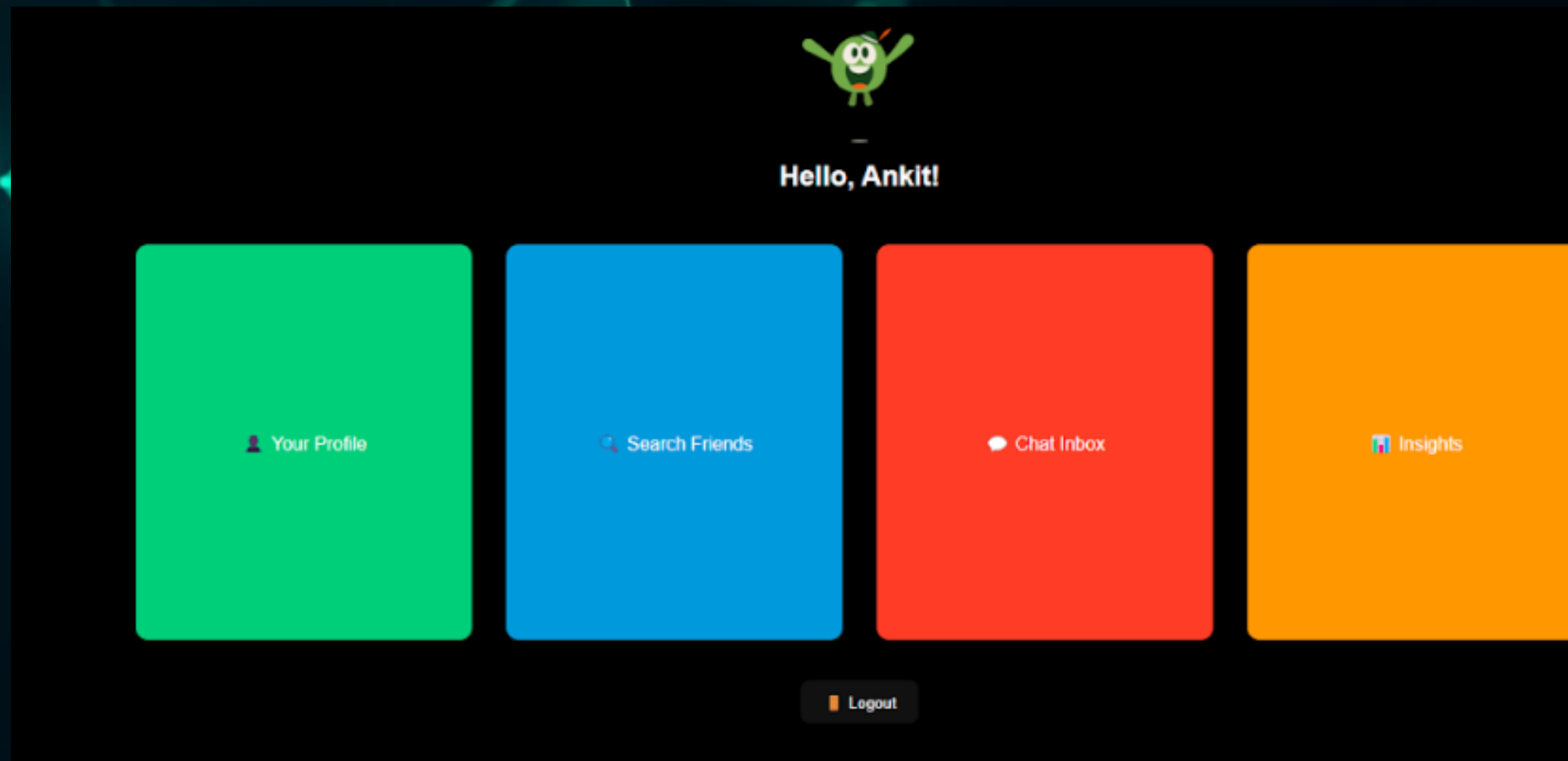
Users can easily edit their profile by adding details like age, gender, and interests. For interests, suggestion boxes (e.g., AI, Coding) are provided for quick selection. Additionally, users can upload their profile picture using a static URL.

VIEW PROFILE

- Displays bio, gender, and interests.
- User can chat with themselves, edit their profile, or go back to the dashboard.
- Conditional Logic:
If the user selects Edit Profile, they are redirected to a separate edit_profile.html page for editing.



DASHBOARD



Top Section:

A welcoming splash screen with a lively "Hey!" GIF to create a friendly and personal feel.

Main Buttons:

- Profile: View and update your personal information.
- Chat Inbox: Check your messages and conversations.
- Search Friends: Discover people by age, gender, and interests.
- Insights: See your activity and new connections.

Bottom Section:

A Logout button for safe and easy exit

BROWSE USERS

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Explore Profiles:

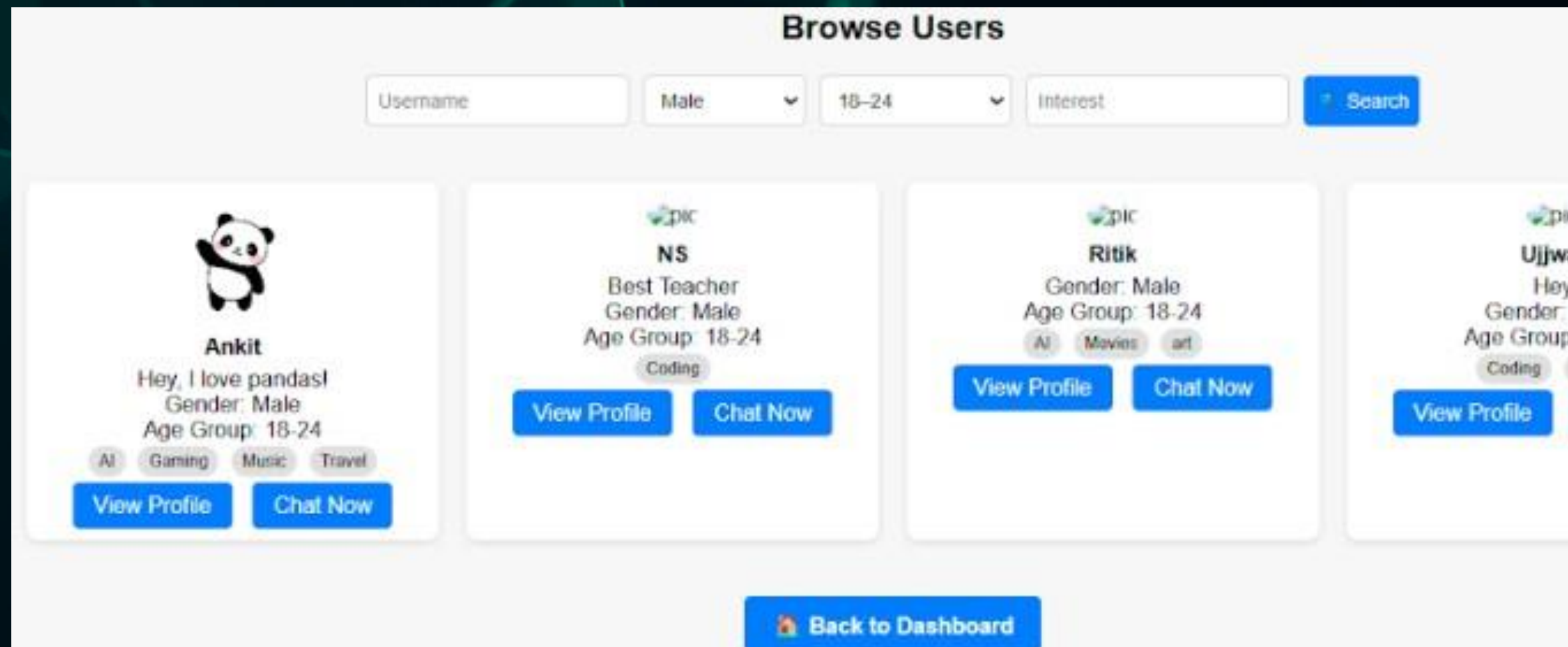
All users are displayed in an attractive card layout, making it simple to view profiles at a glance.

Each card highlights the user's bio, gender, interests, and profile picture.

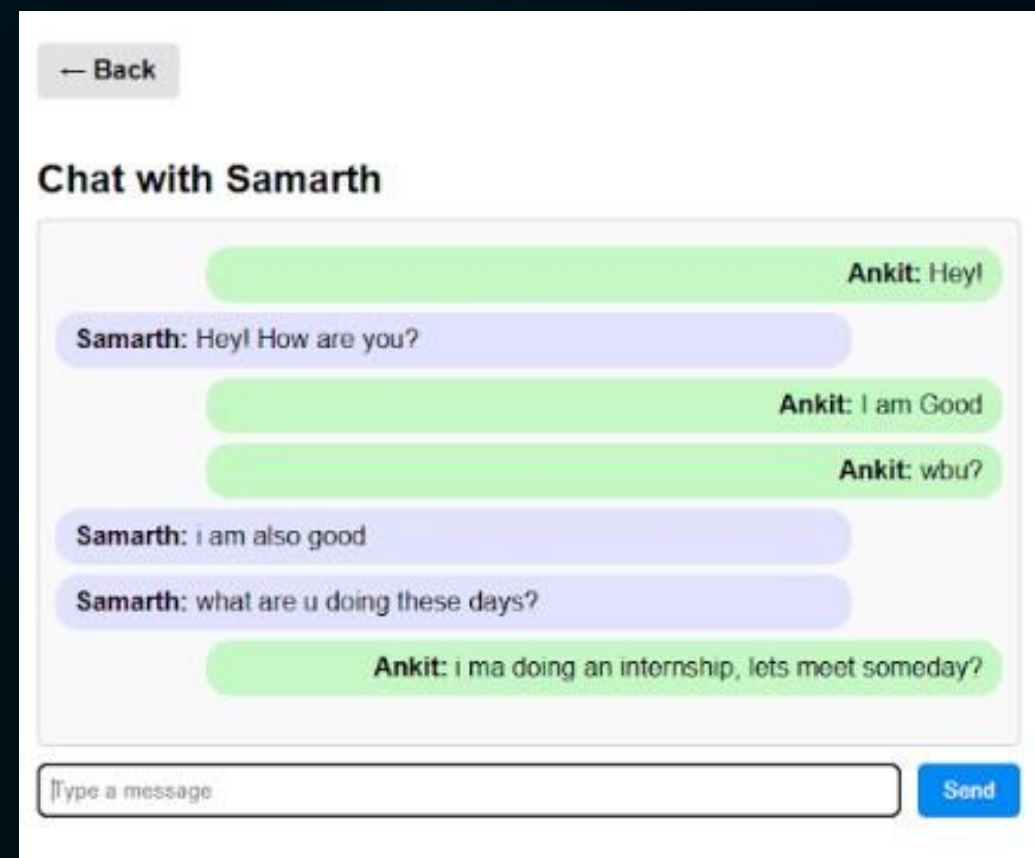
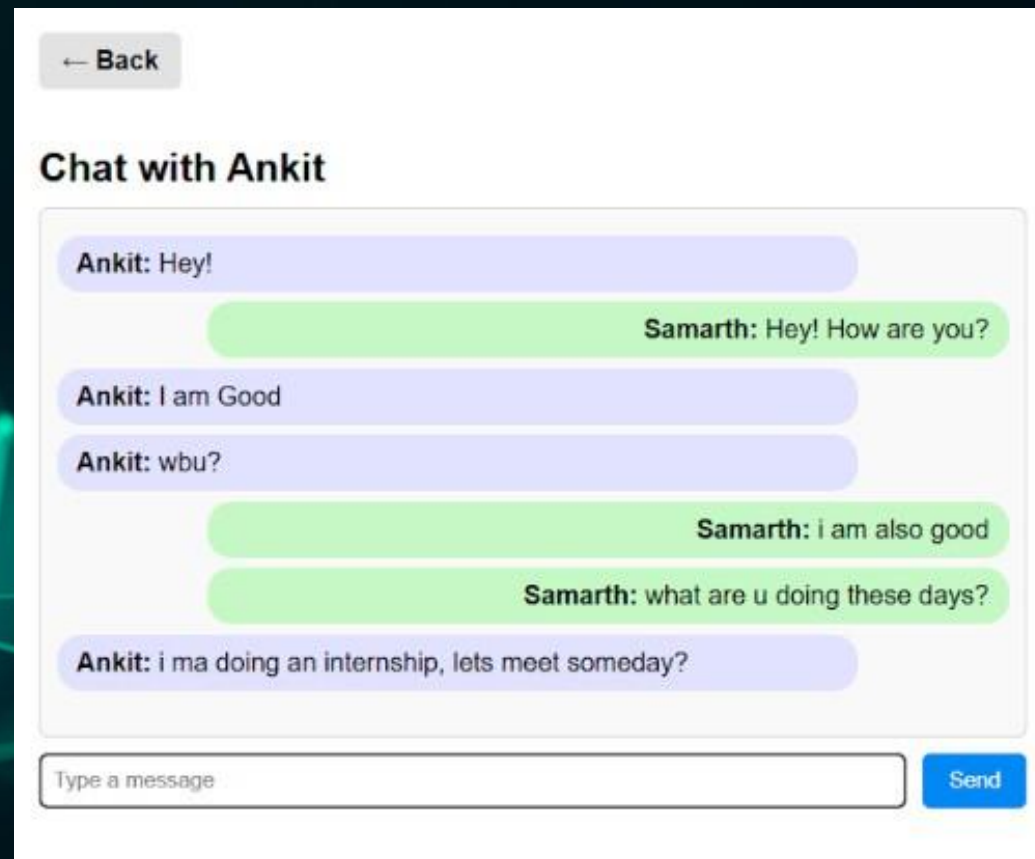
Search & Filter Options:

Users can search and filter others based on:

- Age
- Gender
- Name
- Interests



CHAT BOX DESIGN



Message Bubbles:

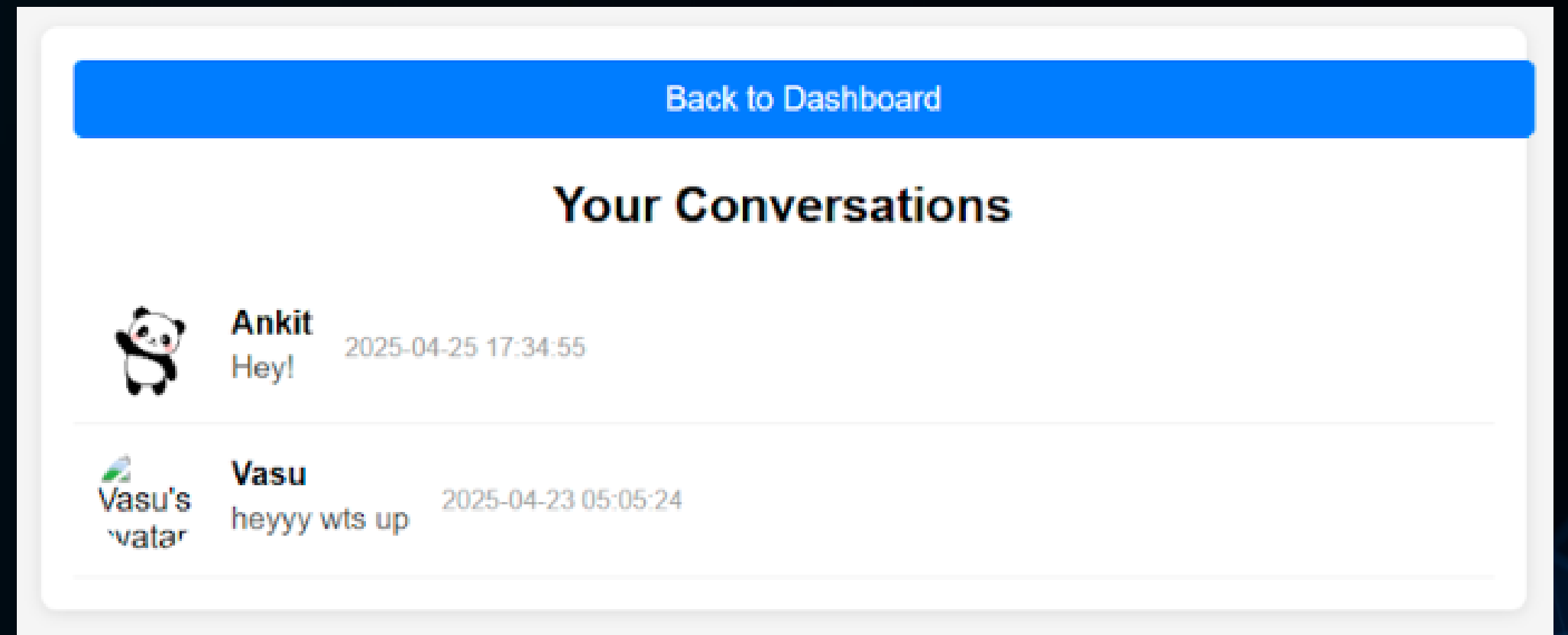
- Green rectangle with rounded corners for sender's messages.
- Blue rectangle with rounded corners for receiver's messages.
- Helps users easily distinguish between sent and received texts.

• Typing Section:

- A text box for writing messages.
- A Send button placed next to the text box for quick message sending.

• Navigation:

- A small grey Back button to return to the previous page.



YOUR CONVERSATIONS

- Shows a list of recent chats with different users.
- Displays a quick preview of each latest message for easy access.
- Navigation:
 - A blue "Go Back to Dashboard" button is provided for easy return.

RESULTS

➤ **User Engagement:**

The registration and profile setup process led to high user engagement, with a significant portion of users completing their profiles by uploading pictures and listing their interests. This feature contributed to deeper personalization and enhanced interaction between users.

➤ **Search Functionality:**

The search functionality, including filtering by interests, gender, and age, was widely adopted. Users frequently utilized these filters to find potential matches, enhancing their experience and helping them connect with others who share similar preferences.

➤ **Chat and Inbox:**

Real-time messaging via the chat feature became a central aspect of the platform. Users interacted regularly with others, engaging in meaningful conversations. The chat inbox allowed easy access to past communications, further fostering continued user interaction and retention.

➤ **User Retention and Performance:**

The platform's intuitive features and seamless user experience led to high retention rates, with a large number of users returning to the platform shortly after registration. Performance was optimized, with fast page load times and minimal downtime, ensuring a smooth and reliable user experience.

CHALLENGES

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➤ **Scaling:**

As the user base grows, scaling the backend infrastructure to support thousands of concurrent users will be a challenge. Efficient database queries and optimized server-side logic will be key to addressing this.

➤ **Matching Algorithm:**

While the current filters (interests, gender, and age) work well, future versions will require more advanced algorithms to improve matching accuracy.

➤ **User Privacy:**

Ensuring secure handling of personal data and complying with privacy regulations as the user base grows.





Conclusion

ConvolQ has demonstrated the potential to transform how people connect online, offering a personalized and secure platform that encourages meaningful interactions. The core features, including interest-based filtering and real-time chat, have shown to improve user engagement and satisfaction. With plans for machine learning integration and sentiment analysis, the platform will continue to evolve, providing even better matchmaking and user experience. Future updates aim to refine the matching algorithm and introduce advanced features for deeper insights into user interactions.

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THANK YOU!

FEEL FREE TO ASK ANY QUESTIONS!