

<School of Computing & Information Sciences>

Summer 2024 Capstone II Project

<Blog Post>

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PROBLEM

The primary purpose of this application is to form connections to other users. A basic form of connection can be established by looking at a profile of one's name and profile image. Without a profile page, a user would not have any information regarding who they are talking to. This not only makes conversations feel impersonal but can also pose trust issues within conversation. This lends itself to the solution of creating a profile page for each user to allow some user customizability across the application.

The user would also need to be able to edit their profile information. The creation of a profile page for a user, in addition to allowing the user to edit the page as needed, can allow users to modify their profile information as needed to accommodate to their social needs. For users to maintain their profile information, a measure of user authentication would be needed to ensure profiles are unique for each user, and that each user can securely access the platform.

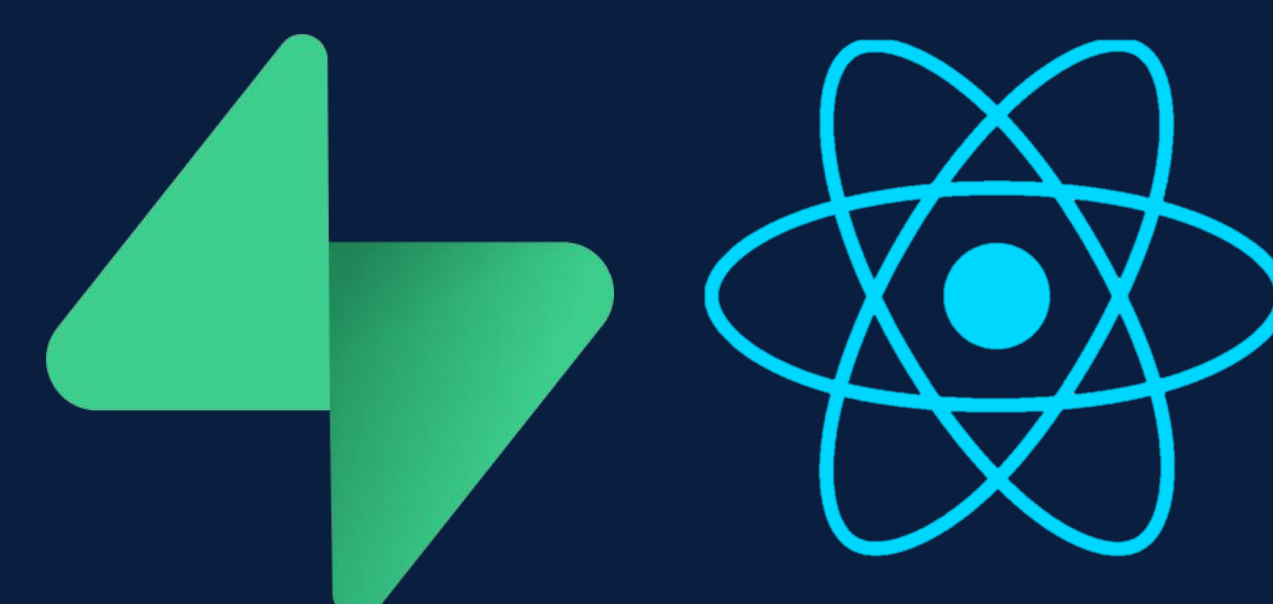
The functionality of the application is not fully realized, as depicted by a limited recommendation system for other users to form chats with one another.

SYSTEM DESIGN

Supabase was utilized to manage the backend. It supports the authentication of users and the creation of new users. The user information is stored within is simplified by Supabase Auth.

React Native was utilized to implement the front end and manage the user interface for both the login page, user creation, and profile creation.

Although not directly associated with the user authentication and profile creation, Stream was utilized to facilitate user communications.



ACKNOWLEDGEMENT

The material presented in this poster is based upon the work supported by Masoud Sadjadi. I thank Masoud Sadjadi for his assistance and mentorship that I received throughout the Capstone II project.

APP DESIGN

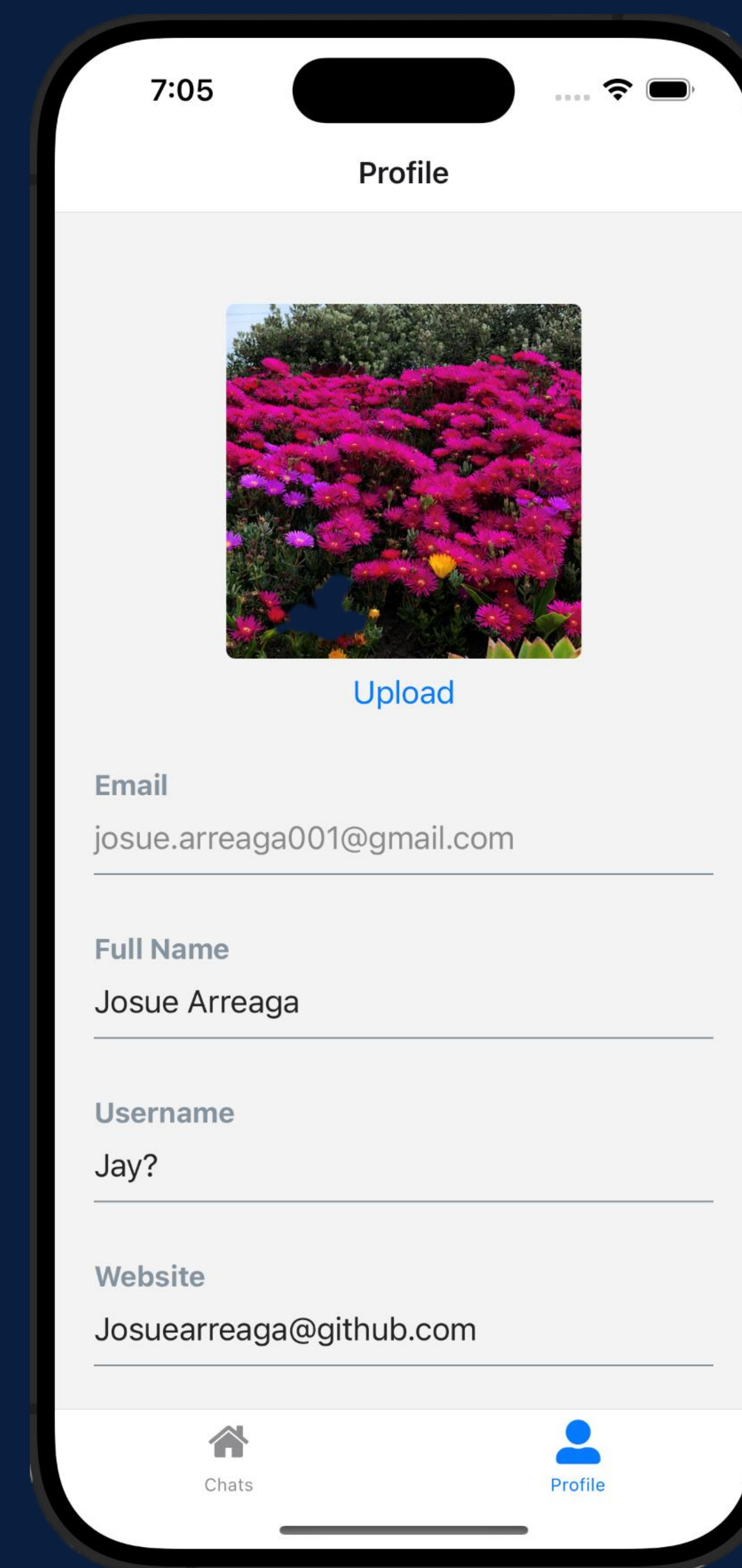


Figure 1: Profile page with support for email, name, username, user website, and profile picture.

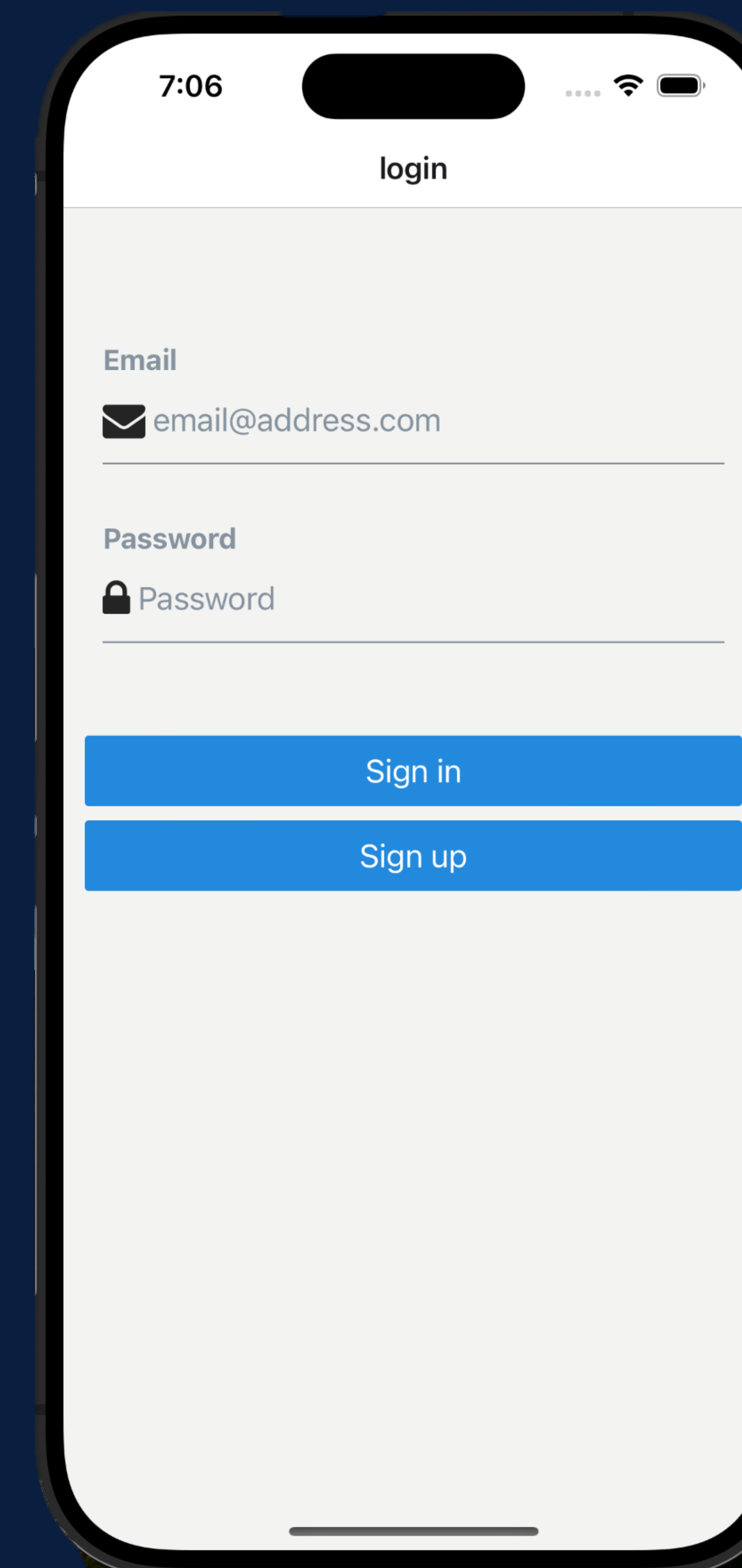


Figure 2: Sign-on page with email and password support. Users can also use this page to create an account.

REQUIREMENTS

For the application to run the following programs are needed:

- VS Code + Node.js
- React Native With Expo Go
- Android or iOS emulators
- Brew (macOS only)
- Watchman (development only)
- Physical iOS or Android device with latest updates

IMPLEMENTATION

Created the user authentication page. This involved managing the user interface and managing the backend via Supabase Auth. User authentication contains email and password support for users to login.

Implemented user profile page. This involved creating the user interface for the page and managing the backend for the user profile information via Supabase. The user profile information contains username, website (a user's GitHub or LinkedIn), and a profile image for users to upload.

Established methodology for users to edit their profile information. Edits made to profile information would be alerted to the user and updated within Supabase.

Collaborated with other team members to tweak functionality of other app components.

SUMMARY

Overall, this application serves as a means for users to easily connect and communicate with one another across multiple platforms. The user creation and authentication allows users to securely log onto the platform alongside manage, modify, and edit profile information as needed. The profile screen implemented can have its functionality extended to potentially work with a more nuanced recommendation engine compared to listing all users within the system. Future work towards the application can go to allowing more methodologies for users to authenticate into the system, such as support from other 3rd party websites.