



Team Studique: Crowdsourcing the College Experience

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Overview

Goal:

Create a visually appealing and responsive web application that allows users to ask campus related questions and get reliable answers back. We aimed to provide students and faculty with a tool that would improve the classroom and campus-wide experience.

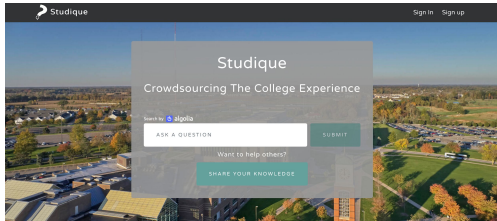


Figure 1: Studique Home Page

Searching / Results

From the home page or the navigation bar on other pages, a user can search for any question that might have an answer. Entering a question in a search bar will take you to the results page, where you can sort questions for by date or rating. A signed in user can comment here, ask new questions, and vote on a question. People who aren't signed in can still view questions and comments, but cannot make any changes or vote.

If a user is just trying to help others, they can click the "Share Your Knowledge" button. This will take you to a list of recently asked questions so they can help to provide others with answers.

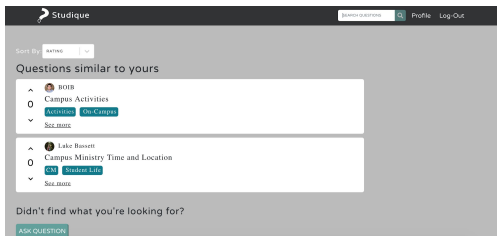


Figure 3: The Results Screen

Authentication / Profile Management

From any page, a user can sign in or create a Studique account to be able to ask and comment on questions. Once signed in, a user can go to their Profile page to manage their name, profile picture, and see any of their asked questions.

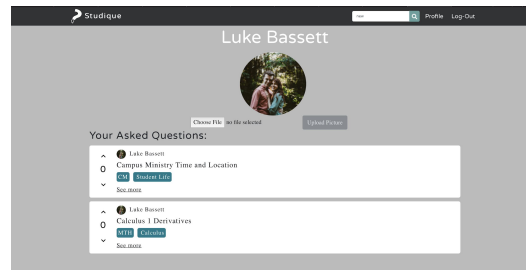


Figure 2: Sample Profile Page

Comments / Voting

From the results page a user can hit the "See More" button on a question. This will expand the page to show any answers other people may have posted on the question along with their username and profile image. This expanded area also allows for users to add a new comment.

In addition to commenting, users can upvote or downvote a particular question. This helps to indicate that a question is popular or helpful, and questions are sorted by rating by default so users can see the most popular questions first.

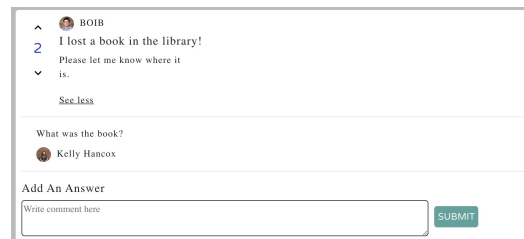


Figure 4: A Sample Asked Question with Comments

Technical Details

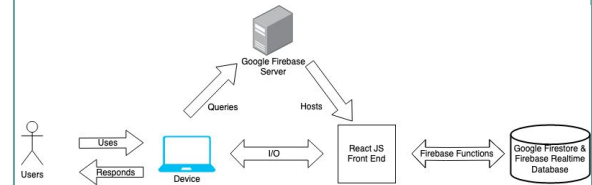


Figure 5: System Diagram for Studique

Components

- React web application frontend
 - React Hooks state management to manage conditional rendering with Firebase authentication
 - Unique visual style and flexibility through Bootstrap
 - React Testing Library and Jest for UI testing
- Google Firebase backend for user authentication, site hosting, and data storage
 - Firebase Realtime Database for questions data
 - Firestore for user pictures
 - Firebase Functions for interacting with the web applications and syncing changes with Algolia
- Algolia backend for full-text search of Firebase data
 - Fully integrated with Firebase Realtime Database
 - Given Search queries from React frontend

Future Work

There are many features that could be added to the website such as adding pictures to questions and comments, more searching/filtering options, user ranking and popularity, classroom specific questions, and more control over question management for professors. While we do not plan on continuing the project into the future, we believe that having a tool like this would be useful to students and faculty.

Reflections

This was an invaluable experience for us all. We all were able to start from little React or Web development experience to be able to develop a full application over the semester. While we weren't able to get every feature we wanted in the application, we were still able to leave with a complete and satisfying product.