

Student Engagement App

<https://github.com/michaelcummins1/StudentEngagementApp>

Michael Cummins
Devin Franchino
Russell Abraham
Jaheim Oates
Tyler Houser

Are you tired of your email being flooded with information you don't care about?

Do you wish there was a way to separate the academic notifications from the community notifications?

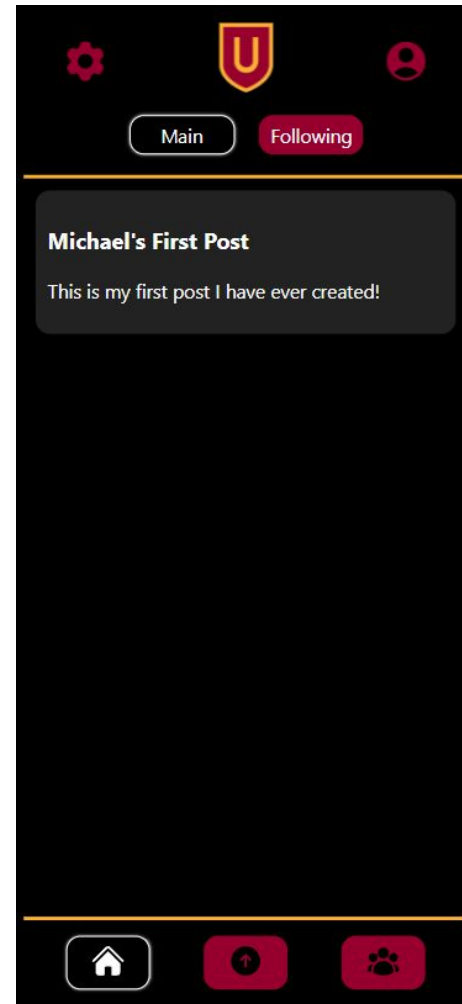
Meet the brand new **Student Engagement App!**

(SEA For short)

Project Overview

In order to solve the problem of email overcrowding, the SEA is intended to be the one stop shop for all things happening on campus. To this end, our app **Features:**

- Account Creation
 - Log in
- Post Creation
 - Create posts to share information
- Post Feed
 - Keep up to date with what's going on
- Follow Accounts
 - Search for your favorite organizations!
- Account Management
 - Update Account information
 - View own posts
- User Settings
 - Light/Dark mode
 - Account Deletion (Unimplemented)



Stakeholders

Typical Member of the Ursinus Community:

- Users who scroll through the app to receive the notifications and posts for events from clubs and organizations
- Ursinus students, faculty, and staff who want to be involved on campus without sacrificing their time to sift through their email

Ursinus Community/Club Leadership:

- Users who want to spread information of the events they are planning/hosting to the wider Ursinus community
- Ursinus students, faculty, and staff who are leaders in clubs and organizations that want to have an avenue to more directly and freely notify the community of events without using email

Requirements

Front End:

- Pages:
 - Log in
 - Main Page
 - Followers Feed
 - Following List
 - Post Creation
 - Settings
 - Profile
- Style Sheet
- Buttons to Move between pages
 - Local Scripts / HTML tags
- Inputs

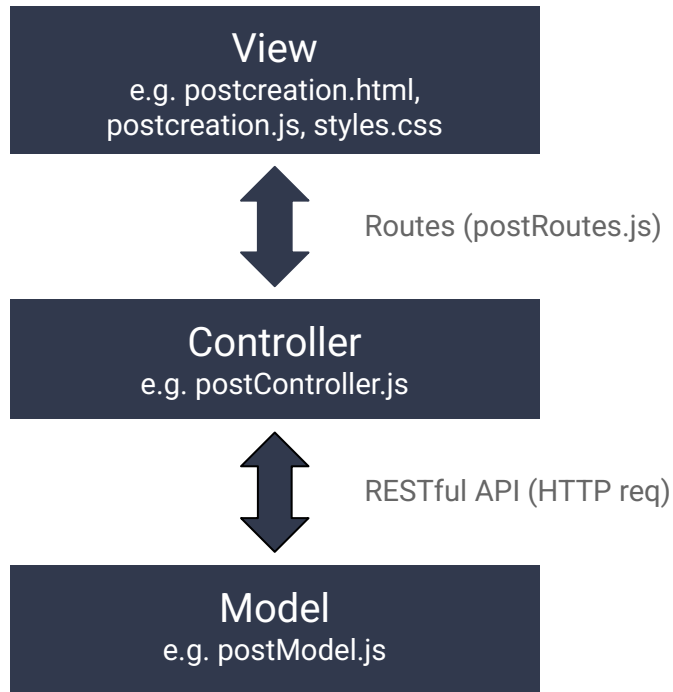
Back End:

- Database For:
 - Accounts
 - Account Permissions
 - Posts
 - Followings
 - Tags
 - Post Tags
 - Better-sqlite3
- API TO:
 - Facilitate movement of information from front end (Inputs) to the Database
 - M V C implementation
- AAA TO:
 - Manage permissions / Authenticate users
 - JWT

Design

We decided to follow a Model View Controller (MVC) architecture for our application.

- **View**
 - HTML, CSS and front end javascript files responsible for displaying UI and data to the end user
- **Controller**
 - 'Middleman' communication between user input/output and the front end to the database input/output and the back end (RESTful API)
- **Model**
 - Direct communication and modification of the data stored within the database tables



Test Plan

Student Engagement App Test Plan:

We wrote the unit tests in JavaScript using Node.js built in assert module to verify key aspect of logic in the system. My goal was to ensure that all inputs were valid. If the inputs were not valid the test cases would throw and catch an error(e).

We also continually perform user acceptance style testing to ensure that the uses of our application mirrored the requirements outlined in the documentation.

Examples of our Implementations:

1. testUserIDKey - The UserIDKey function tested both valid and invalid cases to make sure the function correctly throws an error when the userID is missing.
2. testAdminPermissions - The AdminPermission tests both valid and missing admin rights to ensure proper authorization.
3. testPostPermissions - This function checks whether the user has post permission. The test case verified that it passes when the permission is present and fails appropriately otherwise.

Software Demonstration

With a volunteer!

(FYI before running yourself you need to install node.js, and
npm install the dependencies found in package.json)

Future Implementation

For future development, implementation, and collaboration on this application, we have identified a list of features to be added to the current state of the application:

- Profile Hierarchy
 - Admin
 - Poster (Club / Org)
 - Viewer
- User following functionality
- “Following” Feed
- User Profile Modification
- iOS and Android Ports
- Push Notifications
- Accessibility for other institutions
- Language filters/moderation
- Hashtags
- Club/Interest Filtering
- Deleting accounts/posts