

Univengage Application Proposal: Interactive Website for Clubs and Students

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Abstract

As students increasingly seek community and involvement in university life, there is a clear need for digital platforms that streamline access to campus clubs and organizations. With more students expressing interest in joining clubs, the demand for a streamlined, user-friendly platform has increased. While various online tools exist, few cater specifically to students looking to navigate a variety of clubs and events easily. Furthermore, the absence of a centralized, accessible system leaves many students unaware of events, opportunities, and resources that foster meaningful connections and involvement. The platform will allow students to create personalized accounts, explore a comprehensive database of clubs, RSVP to events, and receive tailored notifications. Club organizers will benefit from tools that enable efficient event management, communication with members, and analytics to track engagement. To ensure inclusivity, the website will integrate accessibility features and cater to diverse student needs, fostering a welcoming environment for all. By bridging the gap between students and campus organizations, this platform aims to enhance student involvement, improve community engagement, and contribute to a thriving, interconnected campus culture.

1.0 Introduction

Digital platforms are essential for helping organizations manage data smoothly and efficiently, supporting everything from inventory tracking to streamlined communication. However, there remains a gap in tools that effectively engage and connect students with campus clubs and events. A thriving student life involves a wide range of activities, yet many students find it challenging to discover organizations and events that align with their interests. Additionally, club organizers need tools to promote their activities and connect with potential members meaningfully. This project aims to create a user-friendly website to address these needs, fostering a more connected and active campus community.

1.1 Background

For students, joining campus clubs and organizations can provide valuable opportunities for networking, skill development, and social engagement, enhancing their overall university experience. However, discovering these opportunities isn't always easy, as information about clubs and events is often scattered across different platforms. This lack of centralized access leaves many students unaware of activities that might interest them. At the same time, club organizers face challenges in reaching potential members and managing their events effectively. By creating a dedicated platform, this project will enable students to explore campus clubs and interact with club organizers seamlessly, creating a more connected and vibrant campus community.

1.2 Motivation

The motivation behind this platform is to support both students and club organizers in building an engaged and active campus community. For students, the platform will make it easy to explore clubs, manage attendance, and stay updated on events. For club organizers, it will offer tools to manage profiles, post announcements, and track engagement metrics, empowering them to build a strong membership base. By combining all club-related information in a single app, this project aims to enhance student involvement, foster lasting connections, and promote a dynamic, inclusive student life experience. Integrating features that can cross platform and mobile accessibility could extend the platform's reach, making it an essential tool for students and clubs alike.

1.3 Related Work

1.3.1 Improving Student Engagement with Personalized Recommendations

Insights from Recommendation and Search in Social Networks (2015) suggest useful methods for enhancing a club-finding app. By incorporating techniques like frequent-sharing pattern mining and user clustering, the app can provide personalized club recommendations based on student interests and schedules. Trust-based recommendations could help users select reliable clubs, incorporating ratings and testimonials to create a sense of trust. Additionally, context-aware features, like real-time event suggestions, could dynamically inform students about nearby or relevant campus events. The author explains that “current methods will be of interest to researchers from both academia and industry working in the field of social networks.”(Ulusoy, Tansel, Arkun 2015).

1.3.2 Incorporating Security and Privacy Into Personal Accounts

Security and Privacy in Social Networks (2012) examines the challenges and strategies for managing privacy in social network platforms, and insights that can enhance a club-finding app's data protection measures. Applying such security frameworks to the app would help ensure users' data remains safe while allowing them to control their privacy settings when joining or interacting with clubs. Additionally, adopting techniques for securing user interactions and profile information could increase trust and encourage students to engage openly on the platform. This emphasis on privacy aligns with the app's goal of fostering a secure, inclusive community.

1.3.3 Improving Notification Management for Users

The study Pinning, Sorting, and Categorizing Notifications (Lin et al., 2024) demonstrates how features like pinning, automated sorting, and categorization improve notification handling by prioritizing critical updates and organizing information efficiently. These insights can be applied to a club-finding platform to ensure students never miss essential announcements or event reminders. For example, pinning could allow users to highlight important RSVPs or club updates, while automated categories like "Upcoming Events" or "New Announcements" streamline navigation. Additionally, dynamic features that adapt to user preferences, such as prioritizing clubs or events based on past interactions, would create a more personalized and engaging experience. By reducing notification overload and ensuring timely access to relevant updates, these tools align with the project's goal of fostering an active, well-connected campus community.

2.0 Problem Statement

Despite the diverse range of clubs and organizations available on university campuses, many students struggle to find opportunities that align with their interests and schedules. Existing systems for promoting campus events are often disorganized, relying on a mix of bulletin boards, social media, and word-of-mouth, leaving useful information scattered and inaccessible. This lack of a centralized platform not only discourages student participation but also hinders club organizers from effectively reaching and engaging their target audiences. Additionally, challenges such as tracking attendance and members, ensuring timely notifications, efficiently managing communication, providing fair access to information, encouraging meaningful interaction, and securing data privacy add to the process. Without an improved and user-friendly solution, both students and club organizers miss out on opportunities to build connections and create an inclusive campus environment. Addressing these gaps is essential to enhance student engagement, promote meaningful involvement, and create a cohesive community where everyone has access to the resources they need to thrive.

3.0 Proposed Project & Significance

The proposed project is an interactive web platform designed to connect students with campus clubs and events, enhancing their university experience. This platform will serve as a centralized hub where students can explore organizations, look into events and news, and receive personalized notifications tailored to their interests. For new students unfamiliar with campus life, the platform will offer resources such as club recommendations, event highlights, and notifications to alert the user of relevant news or events. By providing tools to streamline communication and engagement, the project aims to foster stronger connections within the

campus community. The hope is that this platform will not only increase student involvement and reduce barriers to participation but also promote a sense of belonging and encourage long-lasting connections among students and organizations.

4.0 Objectives (Step-by-step requirements and UX)

Overall Project Objective

The overall objective of this project is to develop a user-friendly, interactive platform that simplifies the process of discovering and engaging with campus clubs and events. The platform will provide a centralized hub where students can explore clubs, view upcoming events, and find opportunities tailored to their interests. Personalized recommendations will guide students based on their preferences and past activities, making it easier to connect with relevant organizations. Additionally, the platform will include efficient tools for managing events, such as RSVP tracking and real-time updates, ensuring students stay informed about changes. Club organizers will benefit from features that streamline communication, allowing them to post announcements, send targeted notifications, and engage with members effectively. To further enhance the user experience, the platform will prioritize privacy and security, safeguarding personal information while offering customizable settings for users to control their data. By addressing these key objectives, the project aims to create an intuitive, engaging tool that supports both students and club organizers in building a vibrant campus community.

4.1 UX Design and Functions

4.1.1 *Getting Started with Univengage*

When users first navigate to the Univengage website, they will be greeted with an engaging and intuitive landing page designed to capture their interest and reflect the vibrant energy of campus life. The homepage will prominently display the platform's key features, such as club exploration, event discovery, and personalized recommendations, tailored to the needs of students and organizations (*see Figure 1 Univengage Homepage*). New users will be encouraged to create an account by clicking on the “Sign Up” button. The registration process will require basic information, such as their name, university email, and a secure password. Returning users can simply log in using their credentials. Upon logging in, the user will be directed to their personalized dashboard, which will display upcoming events, recommended clubs, and announcements tailored to their interests.

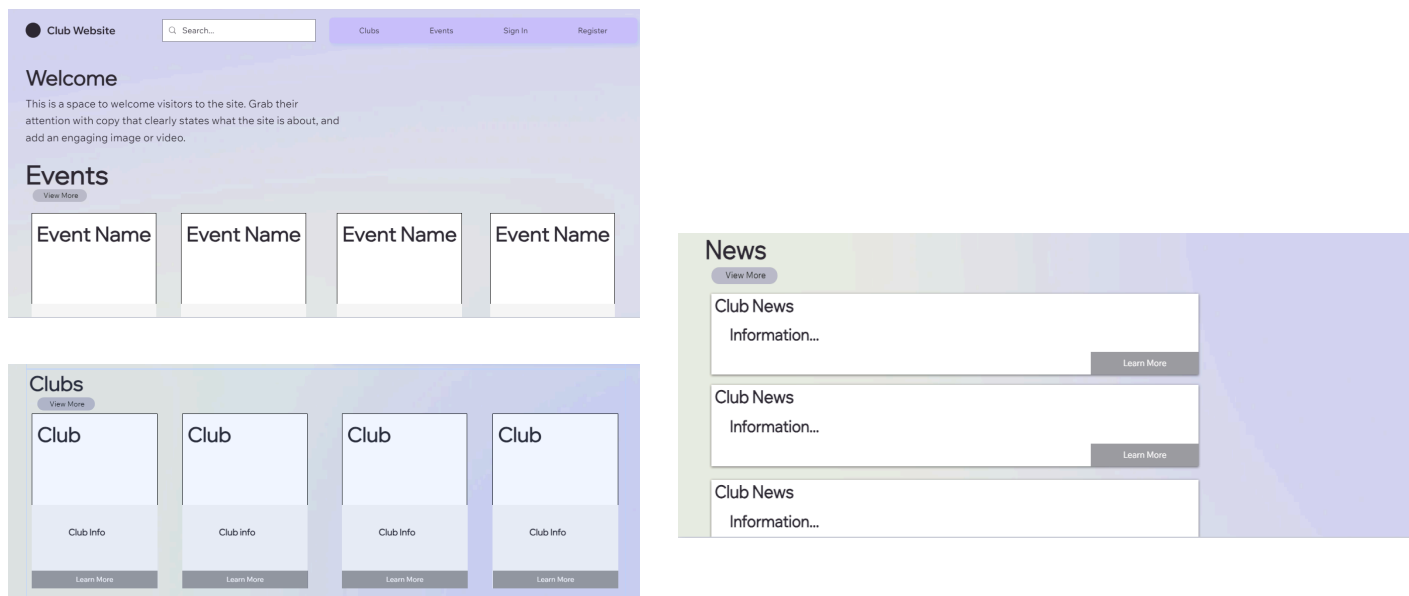


Figure 1 Univengage Home Page

4.1.2 Exploring Clubs, Events, and the Search Page

The Univengage platform features dedicated pages for clubs, events, and a powerful search tool to ensure users can seamlessly navigate and engage with campus activities.

Clubs Page

The Clubs Page serves as a comprehensive directory, showcasing all registered campus organizations (*See Figure 2 Clubs Page*). Each club will have a profile that includes essential information such as the club's name, description, contact details, upcoming events, and membership requirements. Clubs will also have the option to upload images, videos, or achievements to highlight their activities and culture (*See Figure 3 Club Page*). Users can easily join a club or follow it to receive updates about meetings, announcements, and events. For new students, a “Recommended Clubs” section will suggest organizations based on their interests and preferences.

Events Page

The Events Page acts as a central hub for discovering campus happenings. It will display a curated list of upcoming events, categorized by type (e.g., social, academic, sports, cultural). Users can RSVP to events directly from this page and add them to their personal calendars. Each event listing will include detailed information such as time, location, description, and the hosting club. The platform will also highlight trending or featured events, ensuring users are aware of major campus activities (*See Figure 4 Events Page*).

Search Page

The Search Page is equipped with advanced filters to help users find specific clubs or events quickly. Users can search by keywords, categories, dates, or popularity. For example, a student looking for a tech club can type “technology” or filter by academic clubs. Similarly,

event searches can be refined by date, type, or proximity. The search results are displayed dynamically, with rich visuals and relevant information, making the process fast and intuitive (See *Figure 5 Search Page*).

Together, these pages create an engaging and efficient system that ensures students can easily find clubs to join, events to attend, and the connections they need to thrive in their campus community.

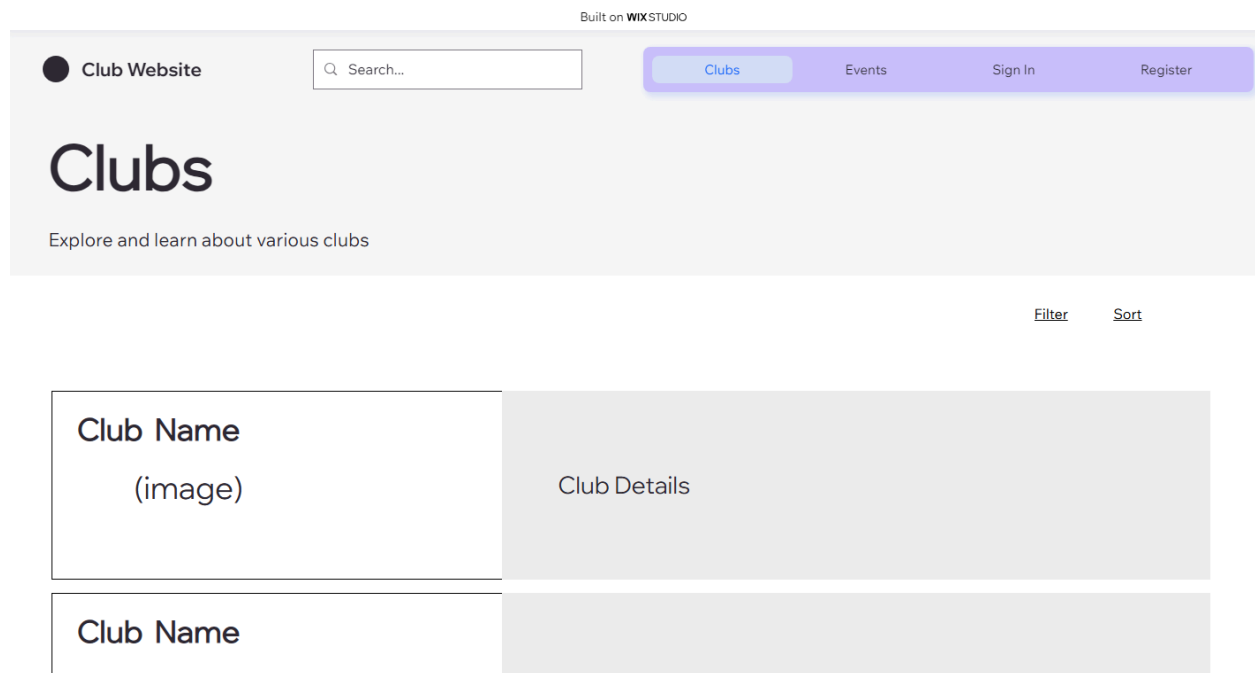


Figure 2 Clubs Page

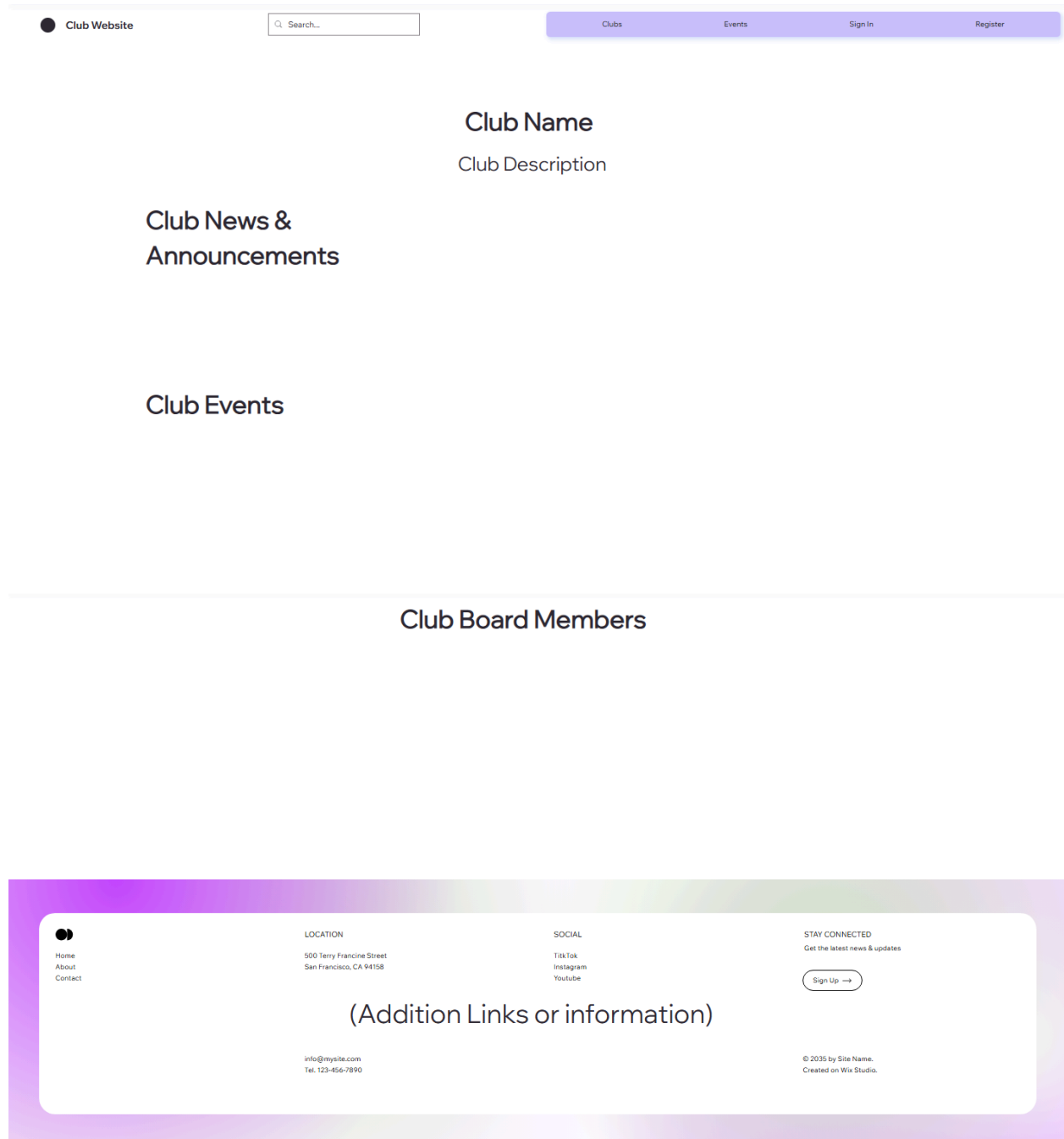


Figure 3 Selected Club Page

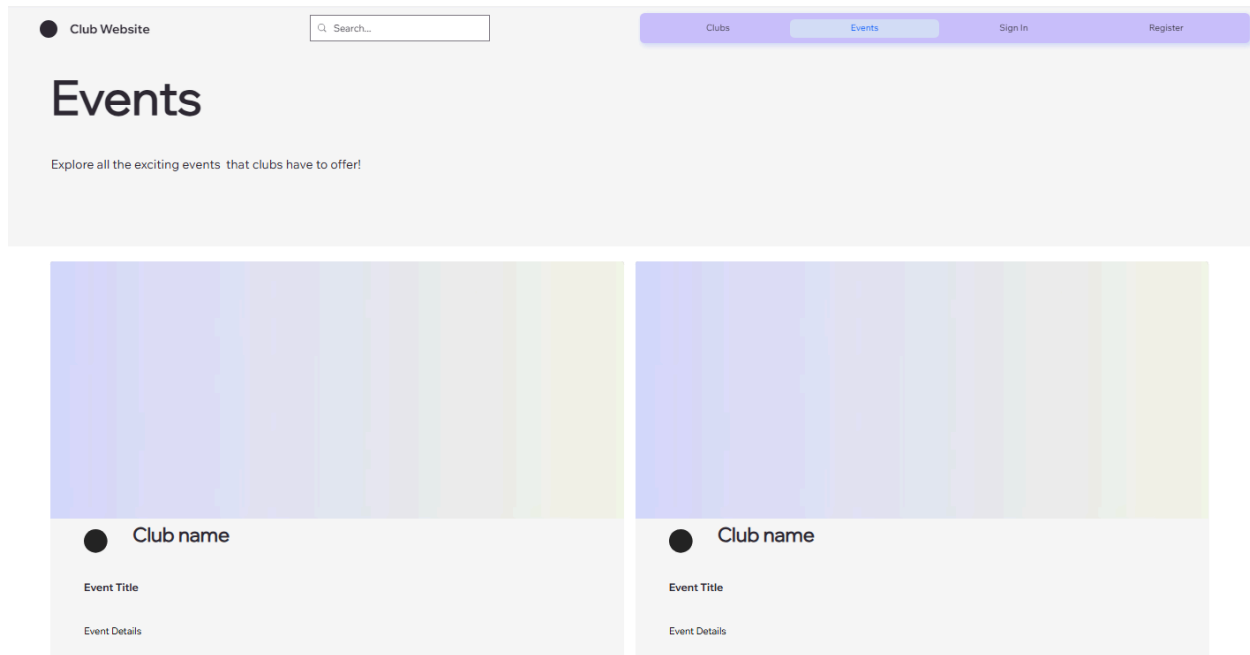


Figure 4 Events Page

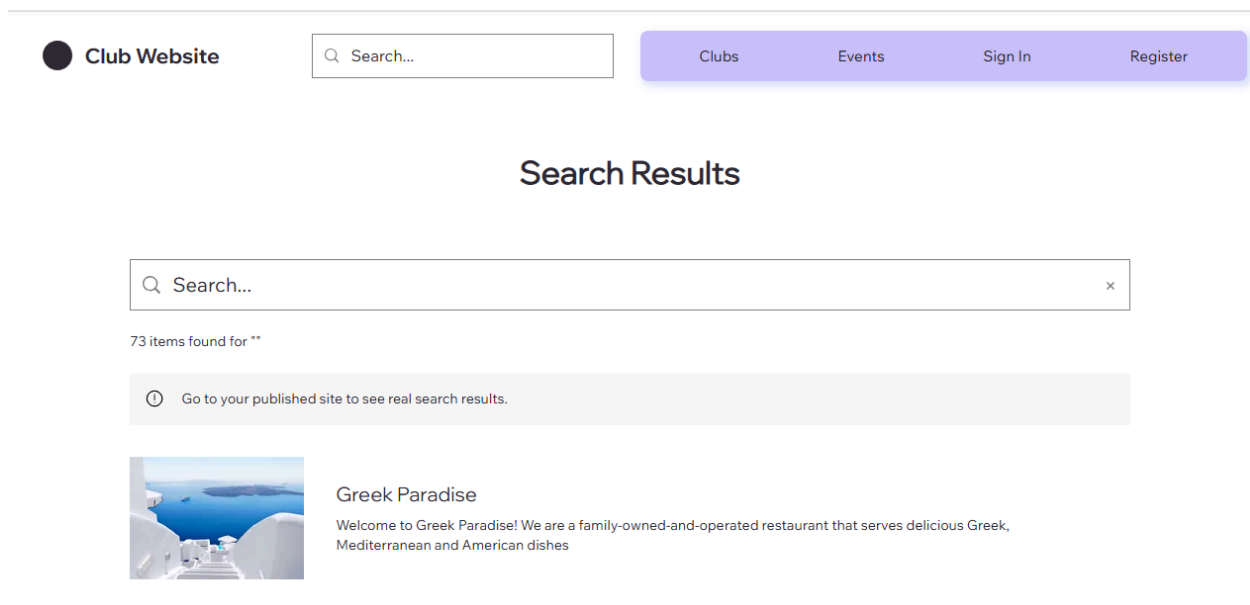


Figure 5 Search Page

5.0 Activities

5.1. *Functionality*

Functionality will be an important aspect of Univengage, ensuring it effectively meets the needs and expectations of busy students. The platform focuses on simplifying the process of discovering, joining, and managing campus clubs and events. By allowing students to input their preferences, the system can generate personalized recommendations for clubs and activities that align with their interests. Additionally, the platform streamlines club and user engagement by organizing memberships, sending event reminders, and facilitating communication between members and organizers.

5.2. User-Friendly Design

The platform is designed to be easy to use, with a simple layout and clear navigation. Students should be able to browse clubs, search for events, and manage their profiles without confusion. The design will be tested with real users to ensure it's intuitive and accessible for everyone. This way, the platform will be enjoyable and convenient for both students and club organizers.

5.3. Security and Privacy

Protecting user data is a top priority for Univengage. The platform will use secure login methods, encrypted data, and safe communication channels to keep personal information private. Users will also have control over their privacy settings, deciding what information they share and with whom. These measures will ensure that everyone feels safe using the platform.

5.4. Data Analytics

Univengage will use data analytics to improve user experience and support club organizers. For students, analytics will refine personalized recommendations based on interactions, memberships, and preferences. Club organizers can track metrics such as RSVPs, attendance, and member activity to plan better events and measure engagement. Inspired by research on optimizing data workflows through user-driven experimentation, Univengage will continuously refine its analytics systems to deliver accurate, meaningful, and actionable insights to users (Rajenthiram, 2024).

6.0 Development Environment

6.1 *Software Requirements*

For the development of the Univengage platform, the programming languages and technologies used will include Python, JavaScript, CSS, and HTML. Development will be conducted using Visual Studio Code as the Integrated Development Environment (IDE) on Windows 10/11 (64-bit). The platform will leverage frameworks like Django for backend development and React.js for the frontend. Web technologies such as HTML5, CSS3, and JavaScript ES6 will ensure compatibility and functionality. (*See Table 1 Software Requirements*)

| Type | Software |
|-----------------------|-------------------------------|
| Programming Languages | Python, JavaScript, CSS, HTML |
| IDE | Visual Studio Code |
| Operating System | Windows 10/11 (64-bit) |
| Web Technologies | HTML5, CSS3, JavaScript ES6 |

| | |
|--------------------|------------------|
| Software Framework | Django, React.js |
|--------------------|------------------|

Table 1 Software Requirements

6.2 Hardware Requirements

The hardware needed to develop and run the Univengage platform includes an Intel i3 or equivalent AMD processor with a speed of at least 3.2 GHz and 8 GB of RAM. A stable internet connection with a speed of 20 Mbps or higher is recommended for smooth development and testing processes. (See Table 2 Hardware Requirements)

| Type | Hardware |
|-----------------|----------------------------|
| Processor | Intel i3 or AMD equivalent |
| Processor Speed | 3.2 GHz or higher |
| RAM | 8 GB |
| Internet | 20 Mbps or higher |

Table 2 Hardware Requirements

7.0 Reports and Products

The final product for this project will be an interactive web application designed to help students discover and join campus clubs and events. This product will be presented and demonstrated to the Computer Science Department and project advisor upon completion. Supporting materials will include a detailed user guide for navigating the platform, and a step-by-step guide for deploying and maintaining the system.

8.0 Schedule

Below is the planned schedule for completion of this project within the timeframe of the Spring 2025 semester at California State University, Fullerton (*See Table 6 Schedule for Univengage Web App*).

| 2025 | Jan | | Feb | | | | Mar | | | | Apr | | | | May | | | Summary | |
|---------------|-----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|---|---|---------|---------|
| Tasks | 1 | 2 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | Hours | Percent |
| Research | 7 | 10 | 11 | 11 | | | | | | | | | | | | | | 39 | 17% |
| Design | | 8 | 6 | 6 | 8 | 9 | 5 | 5 | | | | | | | | | | 47 | 20% |
| Development | | | | | 5 | 5 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | | | | | 84 | 36% |
| Testing | | | | | | | | | 4 | 4 | 4 | 4 | 3 | | | | | 19 | 8% |
| Modification | | | | | | | | | | | | | 3 | 10 | | | | 13 | 5% |
| Final Report | | | | | | | | | | | | | | 5 | 9 | | | 14 | 6% |
| Demonstration | | | | | | | | | | | | | | | | 6 | 6 | 12 | 5% |
| Hours | 7 | 18 | 17 | 17 | 13 | 14 | 15 | 15 | 14 | 14 | 16 | 16 | 16 | 15 | 9 | 6 | 6 | 228 | 100% |

Table 6 Schedule for Univengage Web App

9.0 References

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