

# OPTIMIZING EVENT MANAGEMENT IN HIGHER EDUCATION INSTITUTIONS: THE UNFILTERED CONNECT APPROACH

Dr. Seema Shokeen<sup>1</sup>, Dr. Pooja Singh<sup>2</sup>, Vinita Tomar<sup>3</sup>, Akshat Jain<sup>4</sup>, Raghav Sharma<sup>5</sup>

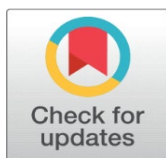
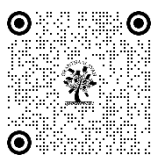
<sup>1</sup>Associate Professor, Dept of Business Administration, Maharaja Surajmal Institute

<sup>2</sup>Associate Professor, Dept of Computer Application, Maharaja Surajmal Institute

<sup>3</sup>Assistant Professor, Dept of Computer Application, Maharaja Surajmal Institute

<sup>4</sup>Associate Analyst, Deloitte USI

<sup>5</sup>Associate Analyst, Deloitte USI



DOI

[10.29121/shodhkosh.v5.i1.2024.3230](https://doi.org/10.29121/shodhkosh.v5.i1.2024.3230)

**Funding:** This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

**Copyright:** © 2024 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.

## ABSTRACT

This research paper presents the development and evaluation of "Unfiltered Connect," a user-friendly web application designed to streamline event management processes in college settings. The aim was to create a centralized platform that allows stakeholders, including students and professors, to easily connect with college societies, view and register for upcoming events, access detailed reports of past events, and receive timely event updates. An initial review conducted with randomly selected college students and professors yielded overwhelmingly positive feedback [17]. Reviewers praised the web application's functionality and expressed their willingness to adopt it in their institutions. Key features appreciated by reviewers included the convenience of a unified platform for all event-related activities, such as event browsing and registration. Unfiltered Connect was developed using industry-standard front-end and back-end technologies, ensuring its longevity and future-proofing. The application outperforms its competitors by offering enhanced functionalities, including the ability to view past event highlights, register for events, and contact Core Members of specific societies via telephone for inquiries or concerns. The findings highlight the feasibility and effectiveness of Unfiltered Connect in meeting the needs of college stakeholders for efficient event management. The web application demonstrates its potential to revolutionize event-related processes by providing a comprehensive and user-friendly platform. The development team remains committed to addressing future requirements, ensuring ongoing improvements and relevance of Unfiltered Connect.



**Keywords:** Interpersonal skills, Communication skills, web application, Information Hub, Points of Contact (POCs).

## 1. INTRODUCTION

During extensive discussions with 100+ students, a prevailing sentiment emerged - the strong desire to actively participate in co-curricular activities, driven by the belief that such involvement enhances their interpersonal skills, communication abilities, & networking opportunities [1]. However, a recurring challenge faced by these students is the difficulty in keeping track of the numerous events taking place throughout the academic year. They expressed a clear need for a centralized platform that would provide comprehensive information about all the events.

The students emphasized the importance of a dynamic and energetic participation in these activities, as they recognized the significant impact it can have on their personal growth & future prospects. Their eagerness to engage in co-curricular events, such as workshops, competitions, cultural festivals, & placement drives, stems from the understanding that these experiences offer valuable opportunities for networking, skill development, and self-expression [12][1].

To address this collective concern, the students emphasized the need for a centralized platform that could serve as a one-stop hub for event information. They envisioned a user-friendly interface that would provide details about upcoming

events, registration procedures, event schedules, & contact information for the respective organizing societies. Such a platform would empower them to proactively participate in events aligned with their interests and aspirations. By addressing these concerns, the development of a centralized event information platform would not only facilitate student engagement but also foster a vibrant campus culture. Providing students with easy access to event-related updates and opportunities would not only enhance their overall college experience but also contribute to their personal and professional development.

Societies are crucial for college stakeholders, fostering camaraderie & developing interpersonal & communication skills [17]. However, a lack of awareness often leads to missed opportunities. To address this, we have created "Unfiltered Connect," a web application serving as an information hub for college events. It offers the following features:

- **COMPREHENSIVE DIRECTORY:** The application includes a directory of college societies, their Points of Contact (POCs), contact details, and events. Stakeholders can easily reach out to the appropriate individuals for inquiries, registration, and participation in society events.
- **ENGAGING IMAGE CAROUSEL:** The application showcases highlights from past events through an image carousel, providing stakeholders with a visual glimpse of the vibrant atmosphere.
- **NEWSLETTER-BASED FEATURE:** Stakeholders can subscribe to the application's newsletter and receive event reminders [15].

To make this vision a reality, existing societies need to connect with the Unfiltered Connect administrator through the college's cultural department. Society heads submit detailed information, including descriptions, contact details of core members, and captivating photographs from past events. Stakeholders are encouraged to submit information about their upcoming and past events using a designated format provided by the administrator. The portal is regularly updated with categorized event information (upcoming or past) based on the data provided by society POCs.

"Unfiltered Connect" provides a centralized platform, promoting visibility for college societies. It expands their reach and enriches the college experience for stakeholders through event promotion and participation [18].

## 2. OBJECTIVES

- To provide all stakeholders of the college with a centralized platform to showcase every registered society. To eliminate the need for students to follow multiple social media accounts of various societies, thereby enabling them to effortlessly stay updated on events hosted by these societies and save valuable time. Additionally, the platform will encompass the Placement Cell of different departments within the college, further assisting stakeholders in effectively keeping track of all existing societies within the institution.
- To enable stakeholders easily discover societies of their preference through a comprehensive search bar that efficiently filters societies based on their respective categories. Furthermore, every society is accompanied by a detailed description outlining its objectives and a comprehensive list of core members, including their contact numbers. To facilitate seamless communication between users of the web application and society representatives during times of need.
- To serve as a dedicated space for publishing information about all upcoming college events, including placement drives, in-house competitions, and speaker sessions. Each time a new event is posted, an email notification will be sent to subscribers of the portal's newsletter. To expand the reach of event advertisements for societies. To enable stakeholders to conveniently register for events through the utilization of user-friendly tools such as Type Form or Google Forms [14].

## 3. METHODOLOGY

This section provides a comprehensive overview of the methodology employed in the development of the "Unfiltered Connect" web application. The methodology encompasses the selection of front-end and back-end technologies, database and storage solutions, and deployment tools. These choices were made based on industry standards, their capabilities, and the project's objectives.

- **FRONT-END TECHNOLOGIES:** The front-end development of "Unfiltered Connect" utilized the following technologies. React.js, a JavaScript library for building user interfaces, was chosen due to its component-based approach and ability to create dynamic and interactive web pages [16][7]. CSS3 was employed for styling the application, enabling customization of colors, fonts, layouts, and animations. Tailwind CSS, a utility-first CSS framework, facilitated the development of highly customizable and responsive designs. Material UI, an icon library based on Google's Material Design, provided a comprehensive collection of pre-built components, including icons [10][11].

• **BACK-END TECHNOLOGIES:** The back-end development of the web application relied on the following technologies. Node.js, a JavaScript runtime built on Chrome's V8 engine, enabled server-side scripting and facilitated communication between the front-end and back-end teams. Express.js, a web application framework for Node.js, provided features and tools for building APIs and handling routing and middleware [5]. Email.js, a client-side technology, was utilized for sending emails without requiring a dedicated server [15]. Axios, a promise-based HTTP client library, simplified communication with APIs and was compatible with Node.js [19].

• **DATABASE AND STORAGE:** To store and manage data for "Unfiltered Connect," MongoDB, a popular NoSQL database, was chosen. MongoDB offers scalability, flexibility, and easy data management. It accommodates various data requirements, including storing registered societies, upcoming and past events, and relevant information [6]. Additionally, Cloudinary, a cloud-based media management solution, was employed for handling image and video uploads, storage, manipulations, optimizations, and delivery. Cloudinary ensured efficient management and delivery of media assets within the web application.

• **DEPLOYMENT TOOLS:** For deploying the web application, Vercel and Netlify were selected as the deployment tools. Vercel, a platform for deploying React.js sites, facilitated easy integration with Git repositories, offered instant continuous deployment, and supported serverless functions. Netlify, another deployment platform, provided a user-friendly interface, fast deployment, continuous integration and deployment from version control, instant forms, and serverless operations. These platforms ensured seamless deployment and reliable hosting of the "Unfiltered Connect" web application.

The methodology for developing "Unfiltered Connect" involved careful consideration of industry-standard technologies and tools to create a stable, scalable, and efficient web application. The chosen front-end and back-end technologies, database and storage solutions, and deployment tools were selected based on their respective strengths and suitability for achieving the project's objectives.

#### 4. LITERATURE REVIEW

Event management in college settings plays a crucial role in fostering student engagement, promoting social interactions, and enhancing the overall college experience. Traditional event management methods often involve manual processes, leading to inefficiencies and communication gaps. This literature review explores existing studies and research related to college event management and highlights the significance of the "Unfiltered Connect" web application in addressing these challenges.

Several studies emphasize the importance of effective event management in colleges.

According to Othman and Musa (2017), well-organized events positively impact student satisfaction, academic performance, and sense of belonging. However, the lack of centralized platforms for event-related activities can hinder efficient communication and coordination among stakeholders (Kapasia et al., 2019).

Web applications have emerged as valuable tools in streamlining event management processes. In their study, Pekin (2016) introduced an event management system that facilitated event planning, registration, and participant communication. Similarly, Ahmed et al. (2018) developed a web-based platform for managing academic events, offering features such as event promotion, registration, and real-time feedback collection. These studies highlight the benefits of web applications in improving event management efficiency and attendee experiences.

"Unfiltered Connect" builds upon existing research by providing a comprehensive solution for college event management. The web application centralizes event-related activities, allowing stakeholders to seamlessly connect with societies, view and register for upcoming events, access detailed reports of past events, and receive timely event updates. The integration of personalized event registration records, society head event posting capabilities, and social media handles aligns with the evolving needs of college communities.

The front-end and back-end technologies employed in the development of "Unfiltered Connect" align with industry standards, ensuring its future-proof nature. By leveraging these technologies, the development team has created a robust and user-friendly platform

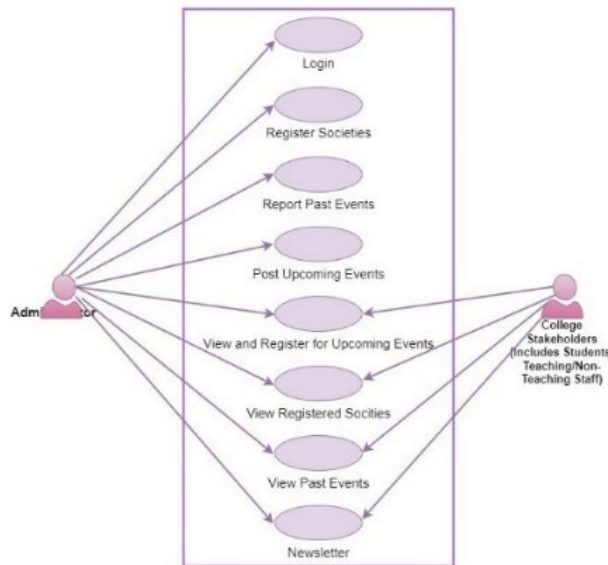
that surpasses its competitors in terms of functionality and convenience.

Overall, the existing literature underscores the significance of effective event management in colleges and the potential of web applications to enhance these processes.

The "Unfiltered Connect" web application bridges the gap by providing a centralized platform that addresses the challenges associated with traditional event management methods, offering a comprehensive solution for colleges seeking to streamline their event management processes and foster greater stakeholder engagement.

### 5. SYSTEM ARCHITECTURE

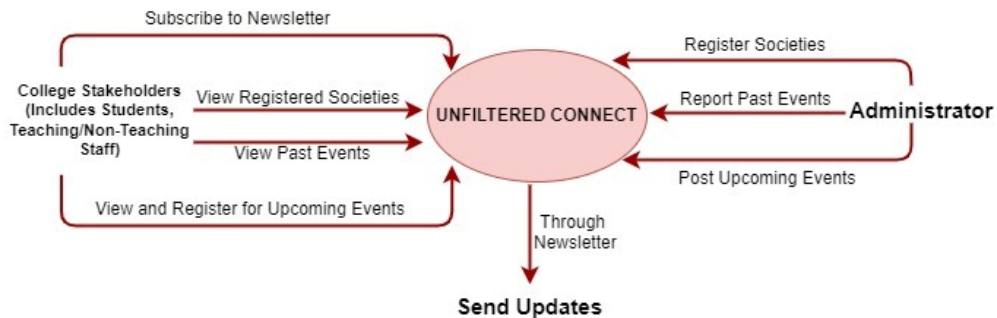
The system architecture of the "Unfiltered Connect" web application is a critical component that ensures the smooth & efficient functioning of the platform. This section presents an overview of the system architecture, highlighting the key elements and their interrelationships. The architecture is visualized using various diagrams, including Fig. 1 the Use Case Diagram, Fig. 2 Data Flow Diagram (DFD) Level 0, Fig. 3 the DFD Level 1, and Fig. 4 the Entity-Relationship (ER) Diagram [3][2].



**USE CASE DIAGRAM**

**Fig. 1:** Use Case Diagram

Fig. 1 illustrates, the Use Case Diagram which is a high-level view of the functionalities and interactions between actors and the system. It illustrates the different use cases and how they relate to the users of the web application [3][2]. By visually representing the user-system interactions, the Use Case Diagram helps in understanding the core features and capabilities of "Unfiltered Connect."



**LEVEL - 0  
DATA FLOW DIAGRAM**

**Fig. 2:** Data Flow Diagram (DFD) Level 0

Fig. 2 demonstrate, The Data Flow Diagram (DFD) Level 0 which gives an overview of the system's major processes and their interactions with external entities. It illustrates the flow of data between these entities and the system, depicting how inputs are transformed into outputs [3][2]. The DFD Level 0 offers a holistic understanding of the system's overall structure and the data flows within it.

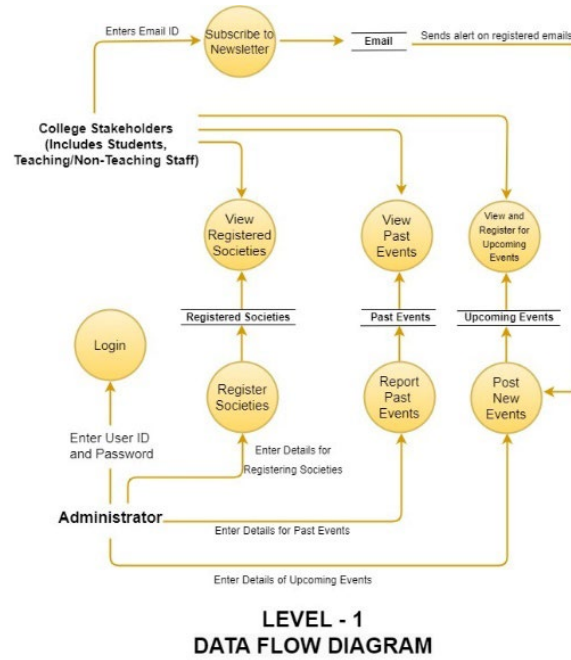


Fig. 3: Data Flow Diagram (DFD) Level 1

Building upon the Fig. 2 DFD Level 0, Fig. 3 exemplify DFD Level 1 which dives deeper into the individual processes identified in the Level 0 diagram. It presents a more detailed view of the data flows, processes, and data stores within each process [3][2]. The DFD Level 1 offers a more granular understanding of the system's internal workings and provides insights into the data transformations and storage.

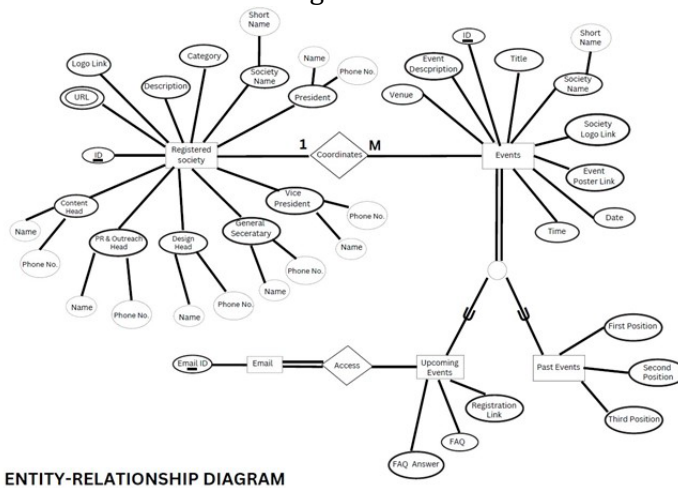


Fig. 4: Entity-Relationship (ER) Diagram

Fig. 4 represent Entity-Relationship (ER) Diagram which displays the system's database structure and the relationships between entities. It showcases the entities (such as users, events, societies) and their attributes, as well as the relationships and cardinalities between them [3]. The ER Diagram provides a clear depiction of the data model underlying the "Unfiltered Connect" application.

By utilizing these diagrams, the system architecture section of this research paper aims to provide a comprehensive understanding of the "Unfiltered Connect" web application's structure and functionality. The diagrams visually represent the system's key elements, processes, data flows, and database structure, facilitating a clear comprehension of how the different components work together to support the functionalities of the web application.



## 6. Features and Functionality

### a. Society Information:

- Display a list of registered societies in the college.
- Provide a brief description of each society, including their focus or area of interest.
- Implement a search bar to filter societies based on categories or keywords.

### b. Society Contact Details:

- Provide contact details for the Core Members of each society.
- Enable students to raise concerns or get solutions for their queries by contacting the society's Core Members.

### c. Society Recruitment:

- Allow societies to open their recruitments.
- Provide information about recruitment dates, requirements, and application procedures.
- Enable students to apply for societies when their recruitments are open.

### d. Events:

- Display upcoming events and past events in separate sections.
- Provide a short description of past events in the highlights section.
- Show the names of winners for past events to inspire and motivate students.
- Provide essential details about upcoming events, including event description and date.
- Allow students to register for upcoming events through a "Register" button.
- Mention Point of Contacts (POCs) for each event to address student concerns or queries.

### e. Admin Panel:

- Provide a secure login system for administrators.
- Allow administrators to register new societies by providing relevant details.
- Enable administrators to register new events and upcoming events by filling out necessary information.

### f. Newsletter [15]:

- Offer a feature to subscribe to a newsletter using the user's email ID.
- Send a Thank You email to subscribers upon successful subscription.
- Send regular updates and event notifications to subscribers via email.

### g. Automatic Updates:

- Automatically update the events and societies page on the portal when the admin submits new details.

By incorporating these features and functionalities, the "Unfiltered Connect" web application aims to provide a unified platform for college stakeholders to stay informed about societies, events, & recruitment opportunities.

## 7. Result and Discussion

### a. Homepage:

- Welcome message and brief introduction to the Unfiltered Connect portal.
- Navigation menu or sidebar for easy access to different sections.
- Highlight upcoming events, recent society updates, and featured societies.

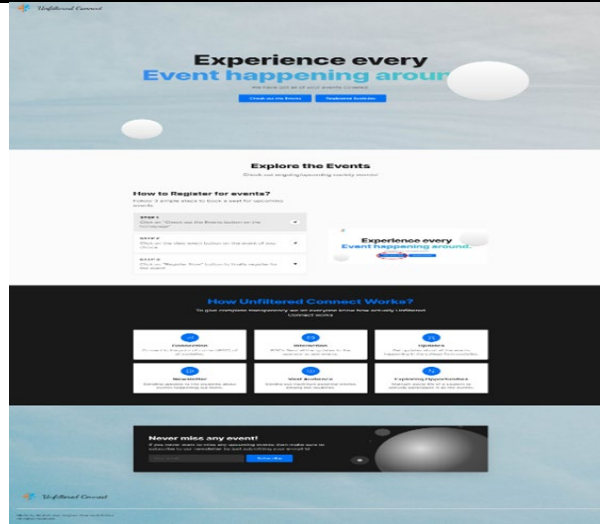


Fig 5: Home Page

**b. Societies Page:**

- Display a list of registered societies with their respective descriptions.
- Filter societies by categories using a search bar or dropdown menu.
- Society cards or tiles showcasing society name, logo, and brief information.
- Option to view more details about each society and their contact information.

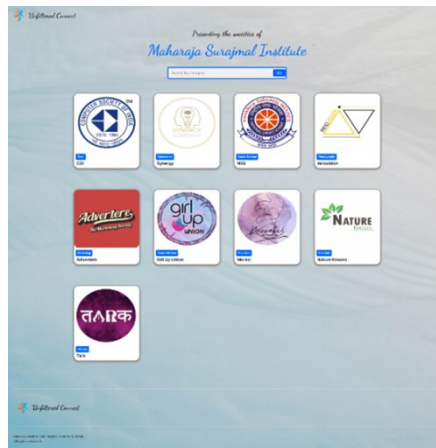


Fig 6: Registered Societies Page

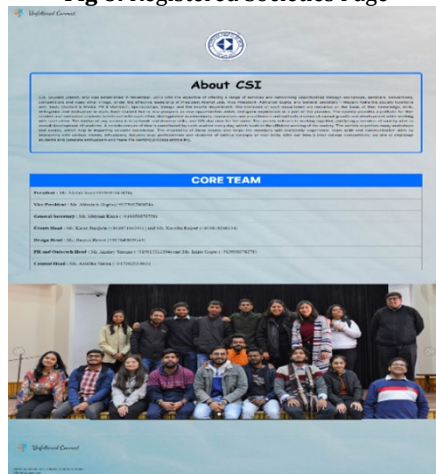


Fig 7: About the Society

**c. Events Page:**

Separate sections for upcoming events and past events.

### UPCOMING EVENTS:

- Event cards displaying event name, date, and brief description.
- "Register" button for students to sign up for upcoming events.
- Point of Contact (POC) details for each event.

### PAST EVENTS:

- Event cards showcasing highlights and winners' names.
- Option to view more details about past events and winners.

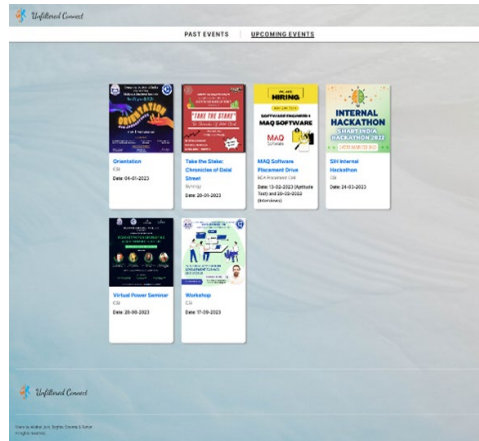


Fig 8: Upcoming Events Section

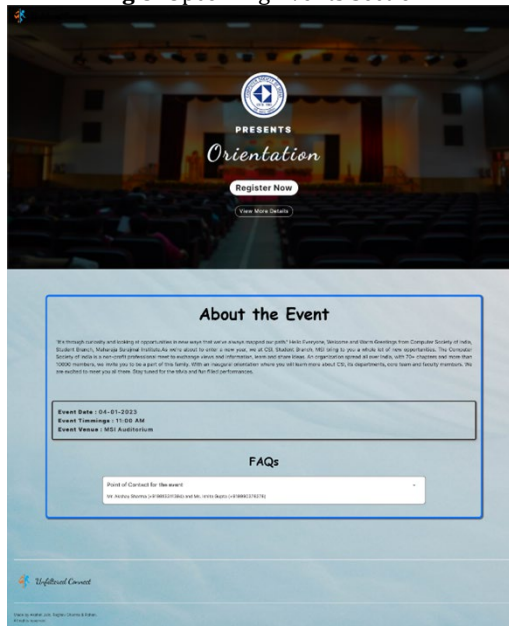


Fig 9: Event Details (Upcoming)



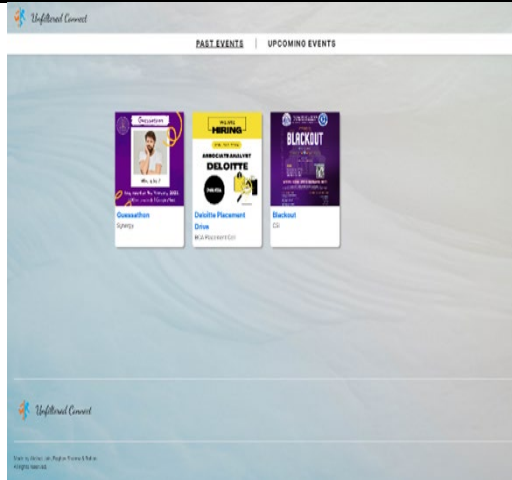


Fig 10: Past Events Section

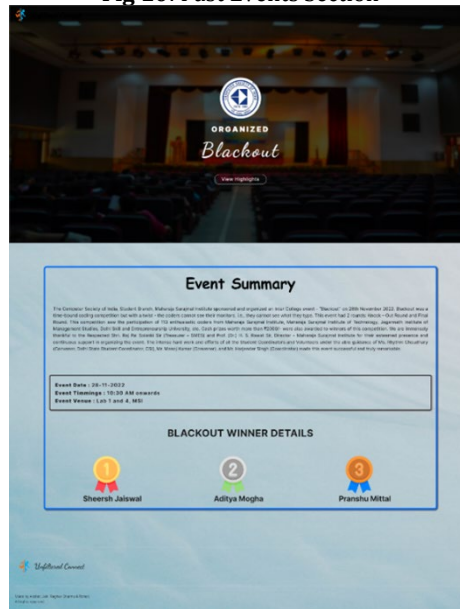


Fig 11: Event Details (Past)

**d. Admin Panel:**

- Login page for administrators to access the admin panel.
- Dashboard displaying options to register societies, new events, and upcoming events.
- Forms for administrators to input relevant details and submit updates.

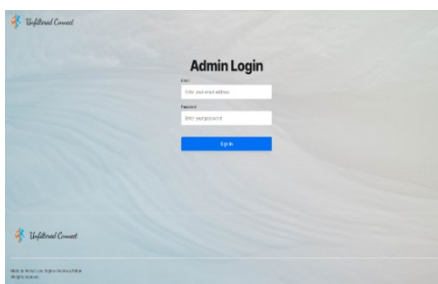


Fig 12: Admin Login Panel

**e. Newsletter Subscription:**

- Subscription form for users to enter their email address.
- Confirmation message upon successful subscription.

- Option to unsubscribe or manage subscription preferences.

## **USER INTERACTION:**

### **a. Navigation:**

- Clear and intuitive navigation to switch between different sections of the website.
- Interactive menus or buttons for easy exploration and access to information.

### **b. Society Exploration:**

- Clickable society cards or tiles to view more details about each society.
- Contact information or contact buttons for students to connect with society Core Members.

### **c. Event Participation:**

- Register buttons for students to sign up for upcoming events.
- Point of Contact details for students to seek event-related information or assistance.

### **d. Admin Interaction:**

- Secure login functionality for administrators to access the admin panel.
- User-friendly forms for administrators to add new societies, events, and upcoming events.

### **e. Newsletter Subscription:**

- Input field and subscribe button for users to enter their email and subscribe to the newsletter.
- Confirmation email upon successful subscription.

## **8. Conclusion**

"Unfiltered Connect" is a web application designed to address the challenges faced by college students and stakeholders in keeping track of events and societies. It provides a user-friendly interface for students to stay informed about placements, recruitments, events, and festivals within their college. The application allows students to explore and discover registered societies based on their interests, and contact details for society CORE members are provided for effective communication. The events module divides upcoming and past events, providing essential details and registration options, along with Point of Contact (POC) information for support. An admin panel with secure login credentials enables administrators to register societies and events, keeping the platform up to date. A newsletter feature allows users to subscribe and receive regular updates on newly posted events, enhancing engagement and participation. "Unfiltered Connect" streamlines the college experience, centralizing information, and fostering effective communication, promoting student engagement and contributing to college ratings. The research paper emphasizes the significance of the platform in addressing challenges, highlighting its features and potential to transform student engagement. Embracing innovative solutions like "Unfiltered Connect" can create a more connected and engaging college environment, and further research can lead to enhancements and customization for different institutions. In conclusion, "Unfiltered Connect" bridges the gap between students, societies, and events, fostering a vibrant and inclusive college ecosystem.

## **9. FUTURE SCOPE**

In order to meet the ever-growing requirements and feature requests for web, Android, and iOS applications, the Unfiltered Connect portal has an extensive roadmap for future development. The following major features are planned to be implemented in the near future, enhancing the functionality and user experience of the portal:

• **INDIVIDUAL LOGIN CAPABILITY FOR SOCIETY HEADS:** The portal will introduce a dedicated login system for society heads, reducing the administrative burden. Society heads will have the ability to add new and past events, modify their society's description, remove outdated events, and track the events they have conducted or posted. The administrator will retain super rights to edit or delete society events as needed, but will no longer be responsible for posting content on behalf of the societies.

• **STUDENT LOGIN FUNCTIONALITY:** A comprehensive student login system will be introduced, allowing students to track and manage their event registrations. Additionally, students will be able to rate their experiences in past events, providing valuable feedback and enhancing the overall event participation process.

- **COLLABORATION SECTION FOR MULTI-SOCIETY EVENTS:** To facilitate seamless collaboration between multiple societies, a dedicated collaboration section will be implemented. This feature will enable efficient presentation and coordination of events conducted jointly by multiple societies, fostering a sense of unity and teamwork within the college community.
- **ENHANCED NEWSLETTER FUNCTIONALITY:** The newsletter feature will be further enhanced to dynamically include event details within the email itself. Subscribers will receive comprehensive information about new events, including the event name, hosting society, date, time, venue, and a direct link to access further event details. This improvement will provide users with a more convenient and streamlined experience.
- **PHOTO CAROUSEL FOR PAST EVENT HIGHLIGHTS:** To enrich the past events section, a visually appealing photo carousel will be introduced. This feature will showcase highlights from previous events, allowing users to reminisce and gain a better understanding of the event's atmosphere and achievements.
- **INTEGRATION WITH SOCIAL MEDIA HANDLES:** Every registered society page will include direct links to the respective society's social media handles. This integration will promote increased engagement and interaction between societies and their members, fostering a stronger sense of community and connection.
- **AUTOMATIC EVENT REMOVAL AND NOTIFICATION:** The portal will incorporate an automated mechanism to remove events from the upcoming events section once they have been conducted. Simultaneously, a notification will be sent to the society head, reminding them to register the event as a past event. This feature ensures accurate event categorization and maintains the relevance of the upcoming events section.
- **ENHANCED SEARCH FUNCTIONALITY:** The introduction of an advanced search bar will allow users to explore events based on existing categories. This improvement will streamline event discovery and provide users with a more efficient means of finding events aligned with their interests.

By implementing these future features, Unfiltered Connect aims to continually enhance user satisfaction and improve the overall experience for society heads and students. The portal will remain adaptable to evolving needs and technological advancements, ensuring its relevance and effectiveness in facilitating efficient event management and participation within college communities.

## CONFLICT OF INTERESTS

None.

## ACKNOWLEDGMENTS

None.

## REFERENCES

- Stuart, M., Lido, C., Morgan, J., Solomon, L., & May, S. (2011). The impact of engagement with extracurricular activities on the student experience and graduate outcomes for widening participation populations. *Active Learning in Higher Education*, 12(3), 203-215.
- Software Engineering (3rd ed.), By K.K Aggarwal & Yogesh Singh, Copyright © New Age International Publishers, 2007
- Software Engineering | Tenth Edition | By Pearson
- Arnold, K. D., King, I. C., & Altbach, P. G. (Eds.). (1997). *College student development and academic life: Psychological, intellectual, social, and moral issues* (Vol. 4). Taylor & Francis.
- "Get Programming with Node.js" 1st Edition by Jonathan Wexler.
- ITL Education Solution Limited, "Introduction to Database System" Peason.
- The Road to Learn React by "Robin Wieruch".

<https://stackoverflow.com/>

Bhatt, S., Manadhata, P. K., & Zomlot, L. (2014). The operational role of security information and event management systems. *IEEE security & Privacy*, 12(5), 35-41.

<https://tailwindcss.com/>

<https://github.com>

Patton, L. D., Renn, K. A., Guido, F. M., & Quaye, S. J. (2016). *Student development in college: Theory, research, and practice*. John Wiley & Sons.

<https://codepen.io/>

Preston, C. (2012). *Event marketing: how to successfully promote events, festivals, conventions, and expositions*. Wiley.

<https://www.emailjs.com/>

<https://react.dev/>

Burke Jr, L. H. (2013). Why we can't wait: diversity planning in community colleges. *Community College Journal of Research and Practice*, 37(11), 839-843.

Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019). Social media addiction: Its impact, mediation, and intervention. *Cyberpsychology: Journal of psychosocial research on cyberspace*, 13(1).

<https://www.npmjs.com/package/axios>