Design and Development of a Club Hunt Application Using PHP and Android

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ABSTRACT

Club Hunt is a site that is specifically made for students to make the process of finding and participating in campus clubs easier. This centralized system provides an easy-to-use interface for browsing different student organizations, such as academic, professional, recreational, and social clubs. Club Hunt allows students to search for clubs of interest, browse upcoming events, and network with peers. The platform increases student engagement and lessens the problem of fragmented discovery processes. Our solution features tailored recommendations, an extensive database, and mobile optimization to guarantee access. By connecting students with organizations, Club Hunt creates a richer and more diverse university community.

Keywords : Student Platform, Clubs, Events, Participation, Social Network.

1 Introduction

University life provides many chances for students to develop academically, socially, and professionally. One of the main avenues through which students interact with one another and enhance their leadership capabilities is by attending campus clubs and organizations. Nonetheless, most students struggle to find and participate in these clubs because of ineffective and dispersed information outlets. Many traditional forms of notification, like word-of-mouth, bulletin boards, and posters, do not offer students complete or current information about the clubs and activities that are available.

The absence of a central platform for club discovery results in underrepresentation and lost opportunities for interested students who might otherwise want to join clubs related to their areas of interest and future careers. Club organizers also find themselves with low visibility and participation, which does not make it easy for them to get new members and plan events effectively.

Club Hunt solves these problems by delivering an easy-to-use digital platform that enables students to look around, search, and connect to clubs with ease. Using personalized suggestions, live event notifications, and social networking capabilities, Club Hunt increases

student participation, promotes community spirit, and enables all students to have equal opportunities for extracurricular activities that support their personal and professional growth. The website will help to close the gap between students and clubs so that students can engage easily with campus life and clubs can reach their target group efficiently.

2 Literature Survey

2.1 Usability Testing in Kanban Agile Process for Club Management System [2]

A web-based content management system was created for a football team as part of a master's thesis project at Tampere University of Technology in August 2016. Content management systems, unique implementation strategies, and services that are currently offered were compared in this study. The hosting platform of choice was OpenShift, while the foundation for custom development was Pencilblue CMS. Adding data structures for statistics and player/member information, integrating social media, supporting several teams, and making the website more responsive were all intended improvements for the Roxbury JK website. Development time was reduced by using Node.js for server-side technology. If creating a bespoke system wasn't possible, other possibilities included WordPress with WP Club Manager/SportSpress or Joomla with a Soccer template.

2.2 The Influences of Student Club Events on Students Studying in Linnala Campus[3]

The goal of the 2019 Saimaa University of Applied Sciences study was to determine how student club activities affected the Linnala campus's hospitality management students. The study investigated the club's function in students' academic and experiential learning using interviews and a review of the literature. The results indicate that student organizations such as Saimia Event Club offer significant benefits over competitors in terms of experiences and skill sets, improving students'

readiness for the workforce. The club, local groups, and the university were advised to work together to promote

upcoming events and self-adjust plans. It was suggested that yearly research be conducted in order to keep track of and enhance knowledge regarding the club's influence on student members pursuing careers in hospitality management.

2.3 College Club activity management system[9]

To sum up, the creation of a college club management system is essential to improving the efficacy and efficiency of overseeing many facets of student clubs. This system simplifies administrative responsibilities and promotes teamwork among club members by providing a consolidated platform for managing membership, events, communications, and records. A more structured and engaging club atmosphere is created by integrating elements like role-based permissions, event scheduling, and natural language processing (NLP) for feedback analysis. In addition to helping club leaders, the system's features for scheduling, analyzing comments, and facilitating communication encourage members to get involved in and contribute to club activities. Subsequent developments may concentrate on customized suggestions, instantaneous chat features, and other advancements in machine learning models for feedback evaluation, augmenting the entire functionality.

2.4 Mobile Application For Collage Event Management [5]

In conclusion, the "VNR CONNECT" project tackles the difficulties schools encounter when it comes to manually overseeing student groups and event planning. This project provides a full solution for event organizers to streamline registration, planning, and participant contact by utilizing

technologies such as Firebase and Flutter. To improve their college experience and involvement, it also offers

a centralized website where students can find out about organizations, student chapters, and forthcoming activities. The tool aims to facilitate club collaboration, minimize manual labor, and make event management easier for both participants and organizers. The overall goal of "VNR CONNECT" is to enhance and modernize student engagement and college event management procedures.

2.5 Intelligent Club Management in Peer-to-Peer Networks[7]

In summary, the goals of the creation of the IT Club Management System have been effectively met in helping IT personnel run the club in an organized and efficient manner. The system,which was created with the aid of Adobe Dreamweaver, MySQL, and Photoshop, has simplified

procedures and operations, decreased the amount of data filed on paper, and improved staff-member communication. With systematic advantages and the ability to leverage technology like email and messaging services for effective operations, the system's adoption represents a substantial improvement over manual processes. Based on test results, the system has performed satisfactorily; nonetheless, recommendations for future enhancements center on improving user experiences and honing functions. All things considered, the system's creation represents a step forward in the modernization of club management through the use of digital solutions and efficient workflows.

3 Existing System

Presently, clubs in universities are independent with each having a website of their own. These websites are merely static pages showcasing general information concerning the club, including its background and past events. They lack interactive capabilities that would improve interaction and communication between members. The most significant drawback is the lack of a member login system, which does not allow personal access to club

activities and hinders effective communication between administrators and members. Moreover, event planning is not easy because there is no calendar system, and several clubs organize events on the same date, resulting in scheduling conflicts that compel students to make event choices, lowering participation as a whole. In addition, communication in clubs greatly relies on outside tools such as emails, social media, or word of mouth, which may lead to delays or overlook of vital announcements. Using manual procedures for membership tracking, event registrations, and attendance further makes club management cumbersome and error-prone. Additionally, because every club operates independently, there is no single platform where students can discover various clubs, their events, or membership on one platform. These inefficiencies point to the necessity of a centralized IT Club Management System that brings all clubs under one platform, facilitating easy event planning, better communication, automated tracking of membership, and increased interaction between students and administrators.

4 Proposed System

The system will create a centralized and automated platform for student club management in learning institutions. It will advance administration, event planning, communication, and student involvement through effective scheduling and dissemination of information. The system will be equipped with the following features:

4.1 Automated Club Administration

- Electronic membership sign-up and maintenance for different clubs of students.
- Role-based access control for club administrators, members, and faculty advisors.
- Automated approval process workflows for event submissions, budgetary requests, and announcements.

4.2 Intelligent Event Scheduling

- Avoids conflict in scheduling events from other clubs to not happen at the same time.
- Gives an interface-based calendar to organize events and follow-ups.
- Automatically sends reminders and alerts to attendees.

4.3 Individualized Member Dashboards

- Lists events to attend in the near future, announcements in their clubs, and targeted notices.
- Delivers membership information, event participation history, and recommendation for attending similar events.
- Lets students browse through clubs they may be interested in with no difficulties.

4.4 Seamless Communication Module

- Immediate notifications via email, push, and in-app messaging.
- Group chats and discussion forums for better communication between members.
- A centralized announcement board for club news and institution announcements.

4.5 Feedback Collection and Analytics

- Members can give instant feedback on events via surveys and ratings.
- The system will create analytics and reports based on attendance, engagement rates, and feedback.
- Assists clubs in making the best decisions for future activities based on data-driven insights.

4.6 Secure and Role-Based Access

- Implements user authentication and authorization controls.
- Guarantees data security and privacy for administrators and members.
- Limits access to administrative controls by user roles.

4.7 Centralized Club Directory

- A special listing of all student clubs, descriptions, and important contact information.
- Allows students to browse club events, membership, and accomplishments.
- Promotes participation by emphasizing club activities and previous accomplishments.

4.8 Integration with External Platforms

- Facilitates integration with social media to post updates and promote events.
- Connects with university portals and academic systems for better coordination.
- Allows payment gateway integration for collecting event registration fees (if applicable).

4.9 Expected Impact

- Enhances efficiency by automating club management tasks.
- Increases student engagement through streamlined communication and personalized dashboards.
- Improves event coordination by preventing scheduling conflicts.
- Facilitates data-driven decision-making through analytics and feedback insights.
- Creates a stronger, well-connected student community by providing a single, unified platform.

The system proposed will revolutionize student club administration, enhancing communication, effective administration, and participation, for a dynamic and well-structured student experience.

5. Methodology

The development of the Club Hunt follows a structured methodology involving multiple phases:

5.1 Requirement Analysis

- Perform surveys and research on student club participation patterns.
- Determine issues in current club discovery processes.
- Research technological feasibility and user expectations.
- Examine user preferences for improved personalization.
- Assess integration with current university systems.

5.2 System Design

- Create an easy-to-use interface for browsing and searching clubs.
- Create a stable database with Firebase for club information and event handling.
- Have secure authentication and tailored user experiences.
- Create an event calendar and notification system.
- Integrate AI-based suggestions for clubs.

5.3 Development and Implementation

- Develop using Flutter for the frontend.
- Build backend services using Firebase and MySQL.
- Execute APIs for event updates in real time and notifications.

- Provide functionality to club leaders to control events and member interactions.
- Add a messaging system for easy communication.
- Execute club recommendations based on geolocation.
- Provide social media integration for broader reach.

5.4 Testing and Deployment

- Conduct usability testing with different user groups to refine user experience.
- Perform unit testing for smooth functioning.
- Test with students through user acceptance testing (UAT).
- Deploy on cloud infrastructure with CI/CD automation.
- Make cross-platform compatible for easy accessibility.
- Perform security audits to safeguard user data.

6 Results

The development of the Club Hunt is expected to bring several positive outcomes:

6.1 Increased Local Engagement

- Individualized club suggestions improve student engagement.
- Active event reminders update users in real time.
- Improved student retention via active engagement.

6.2 Economic Growth for Local Businesses

- Targeted advertisements will enable small businesses to reach potential customers effectively.
- Improved visibility for businesses will contribute to the regional economy.
- Business directories, location-based promotions, and local sponsorships will further enhance economic activity.

6.3 Enhanced Educational Awareness

- The clubs are able to effectively control their profiles and activities.
- Raised awareness generates more membership rates.
- Analytics enable insights on students' likes.

6.4 Global and Local News Integration

- Cross-platform compatibility for on-the-go access.
- Responsive design enhances user experience across devices.
- Offline mode for viewing club information offline.

7 Conclusion

Club Hunt successfully streamlines club discovery and participation for college students. There are challenges of user adoption and data accuracy, but continuous improvement and feedback integration will render the platform a useful student tool. With further development, Club Hunt can greatly enhance student life and community formation. Future improvements include AI-powered insights, real-time engagement metrics, and more extensive integrations with university administration systems.

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