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Alumni Tracking System

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Abstract: ***The Alumni Tracking System is a web-based platform designed to enhance the bond between alumni and current students, focusing on better placement opportunities and a stronger academic community. It serves as a centralized database to track alumni careers, current positions, and their willingness to assist in student placements. The system encourages collaboration by allowing alumni to share industry insights, mentor students, and provide job opportunities within their organizations. Features like alumni registration, student-alumni communication, job postings, and advanced search by industry or location make it a powerful tool for career support. Its user-friendly interface ensures easy access for students, alumni, and administrators. By strengthening placement efforts and promoting continuous engagement, the system fosters lasting relationships, boosts student success, and highlights alumni achievements—enhancing the institution's overall reputation. In essence, the system facilitates student growth, promotes lifelong learning, and actively involves alumni in the ongoing development of their alma mater.***

Keywords: Alumni, Tracking System, Educational Institution, Engagement, Communication, Networking.

I. INTRODUCTION

The strong relationship between educational institutions and alumni is vital for building an engaged and supportive community. However, traditional alumni management methods—such as record books and social media groups—are often inefficient and disorganized. An Alumni Tracking System (ATS) bridges this gap by offering a structured and efficient way to maintain alumni records, track career progress, and foster connections between alumni, students, and institutions [1]. A key objective of the ATS is to promote networking and professional development. It allows alumni to connect with peers, share job opportunities, and mentor students—forming a robust career support network [2]. Institutions benefit by tracking alumni achievements, which support curriculum improvement, branding, and fundraising initiatives such as scholarships and research programs [3]. Many alumni lose contact with their institutions after graduation, missing out on reunions, seminars, and career events. The tracking system keeps them informed, encourages participation, and allows them to update their information, keeping records accurate and reducing administrative overhead [3].

The ATS replaces outdated, paper-based systems with a scalable web-based solution. It enables schools, colleges, and universities to strategically build and maintain active alumni communities, enhancing communication and engagement [5]. Moreover, it bridges the gap between alumni expertise and industry demands, ensuring continuous exchange of opportunities and support [6]. For institutions, the ATS provides a centralized alumni database for planning, partnerships, and decision-making [8]. It also offers insights into the effectiveness of education programs based on alumni career progress, helping to align curriculum with industry needs [9]. Alumni benefit from reconnection, expanded networks, and opportunities to contribute through mentorship, guest lectures, and donations [10]. By overcoming the limitations of manual tracking, the ATS promotes virtual events, job placements, and professional webinars, nurturing a proactive alumni network [11]. It also aids in institutional branding by showcasing alumni success stories to attract future students [13].

II. LITERATURE REVIEW

A comprehensive survey of literature points to the increasing significance of Alumni Tracking Systems (ATS) in reinforcing the institution-alumni relationship. ATS systems provide systematic means of monitoring alumni career development, collecting feedback, and improving the quality of education through evidence-based decision-making. The article "Centralized Alumni Management System (CAMS)—A Proto Proposal" presents a centralized system that makes data management easier and improves communication between alumni and institutions. It enables career tracking, event announcements, and mentorship schemes—leading to improved alumni ties and student services [1].

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K.J. Dochen's study at The University of Texas Elementary School reveals a system meant to maintain contact with alumni, record their achievements, and gain useful feedback to enhance academic provision [2]. In "Towards Improvement of the Study Program Quality: Alumni Tracking Information System" (ICT Innovations 2011), the emphasis is on utilizing alumni feedback and employment outcomes to tailor the curriculum to the needs of the present industry. This helps ensure that students are employable and academic programs remain up-to-date [3]. L. Alegado's research, published in JPAIR Institutional Research, assesses an online alumni system that was used in a Cebu City school. It concluded that a properly maintained platform increases alumni satisfaction, facilitates effective communication, and promotes involvement in institutional events such as reunions, mentoring, and employment sharing [4]. Another example of an effective online strategy is the ASMSI Online Alumni System, which provides critical features like career tools, networking capabilities, and event information. It enables schools to track alumni growth and relations management [5]. Mihir Jaywant, in the IOSR Journal of Engineering, suggests an Alumni Tracking System that bridges institutions with graduates by retaining career records and academic comments. This is helpful in program assessments and enhancing alumni engagement [6]. With a more technologically advanced strategy, Nikita Michaeli and team suggest employing GPS, Google Maps API, and social media for tracking alumni in real-time. This blended system promotes interaction, facilitates networking, and facilitates the collection of current data for institutional growth [7]. The "Alumni Information Management Model Based on 'Internet +'" (EMIM 2017) blends traditional systems with contemporary internet technology to provide more effective alumni data collection, continuous interaction, and strategic alliances [8]. Finally, A.C.Z. Lousada and G.d.A. Martins (2005) explain in their research how alumni feedback can enhance course structures, particularly in management education. Their work emphasizes that alumni engagement is instrumental in curriculum building and institutional development [9]. An innovation system focused on alumni tracking, as discussed in *Procedia - Social and Behavioral Sciences*, highlights the creation of a dynamic platform that swiftly responds to the evolving needs of both students and alumni. The study emphasizes the necessity of a flexible and responsive system that allows educational institutions to adapt to academic requirements during a student's tenure and to professional and networking needs post-graduation [10].

III. PROBLEM STATEMENT

In many educational institutions, tracking and maintaining connections with alumni is a significant challenge. Traditional methods, such as manual record-keeping or social media groups, often lack structure, making it difficult to manage alumni data, track career progress, and facilitate engagement. Institutions struggle to maintain an up-to-date alumni database, which limits networking opportunities, mentoring programs, and potential collaborations.

Additionally, existing professional networking platforms like LinkedIn are too broad and do not cater specifically to the needs of a college's alumni and students. Without a centralized system, alumni often lose touch with their peers and their alma mater, missing out on valuable career opportunities, industry insights, and chances to contribute back to their institution.

To address these issues, we propose developing a dedicated Alumni Tracking System that enables institutions to efficiently manage alumni records, foster communication, and provide a centralized platform for networking, job opportunities, and knowledge sharing. The Alumni Tracker will close the gap between current students and alumni by promoting professional growth and community bonding. More than a database, this interactive networking forum will enable alumni to revisit memories, engage in discussion, and reunite with long-lost peers. Alumni will stay updated about college events, contribute to fundraising, and mentor students—thereby fostering a vibrant and interactive alumni community.

IV. OBJECTIVES

1) Develop a centralized web-based system to track alumni records and career progression.
2) Facilitate alumni-student interaction for mentorship and job opportunities.
3) Maintain updated alumni profiles with academic and professional data.
4) Enable administrators to organize alumni events and track engagement.
5) Provide search and communication features to strengthen networking.

V. MATERIALS AND METHODS

The Alumni Tracking System has been developed using a structured methodology that comprises tool selection, database schema design, data acquisition, and modular structure. Developed with current web technologies such as HTML, CSS, JavaScript, ReactJS, NodeJS, and ExpressJS, the system provides a responsive and scalable user interface. Alumni information—e.g., profiles, career information, and engagement—is safely stored in MongoDB. Formed structures provide precise data entry, while the modular structure provides seamless maintenance and future enhancement capabilities.

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A. *Software Technologies and Tools*

The system employs a current tech stack to provide high performance and scalability. For the front end, HTML5 organizes the content, CSS3 offers responsive styling, and JavaScript provides dynamic interactivity. ReactJS constructs quick, reusable components using its virtual DOM, and Bootstrap maintains uniform UI design. For the back end, NodeJS handles server-side operations using non-blocking I/O, ExpressJS makes API development easy, and MongoDB—a NoSQL database—is used to store flexible, scalable data in a JSON-like format.

B. *Dataset*

The dataset is the heart of the system, capturing alumni information like career advancement, further studies, and institutional involvement. It is derived from records, registration forms, and surveys, including employment, academic, and personal details. For accuracy and privacy purposes, the data is cleaned, standardized, and anonymized. With protection and encryption policies, the dataset gives useful insights into alumni achievements and the institution's long-term contribution.

C. *Data Structure*

Every sheet of the dataset refers to a distinct batch year (e.g., "2006IT," "2007IT") with details of student names, contact numbers, email IDs, and job titles. Professional information such as company name, job location, and higher educational status, including mentor or faculty references, is also included. Purpose of the Database:
To keep alumni records for career tracking, networking, event planning, and communication. It assists in locating alumni at various companies or institutions, enabling institutional development and outreach.

D. *Design*

The Alumni Management System adopts a modular architecture that ensures scalability, efficiency, and user-friendliness, while maintaining a secure and interactive environment for alumni engagement. The major components of the system design are detailed below:
User Registration and Authentication
The system provides secure registration and login using encrypted credentials. Alumni sign up with details like name, graduation year, and career info. Only verified users can access the platform, ensuring privacy and trust.

Profile Management
Alumni can easily update personal and professional information, including education, job history, skills, and achievements. This keeps data current and useful for networking, mentorship, and institutional analysis.

Alumni Tracking and Networking
Real-time tracking keeps profiles up to date with job changes and locations. Advanced search filters help users connect based on batch, profession, or region, promoting strong alumni relationships.

Event Management and Notifications
Admins can create and manage events like reunions or webinars. Users receive notifications about events, job postings, and updates, increasing engagement and participation.

Web Interface and User Interaction
The platform features a responsive and user-friendly design for all devices. Alumni can post updates, join discussions, and network through interactive features, building a vibrant online community.

VI. SYSTEM ARCHITECTURE

The Alumni Tracking System has a modular design to facilitate seamless functionality and simple maintenance. The user registration and authentication module manages secure registration and login. The Profile Management Module enables alumni to change their personal, academic, and professional information. The Networking and Search Module enables users to connect with others by batch, location, or industry. An admin panel allows administrators to handle records, events, and platform maintenance in general. Last but not least, the user interface module provides a clean, responsive layout for an intuitive user interface.

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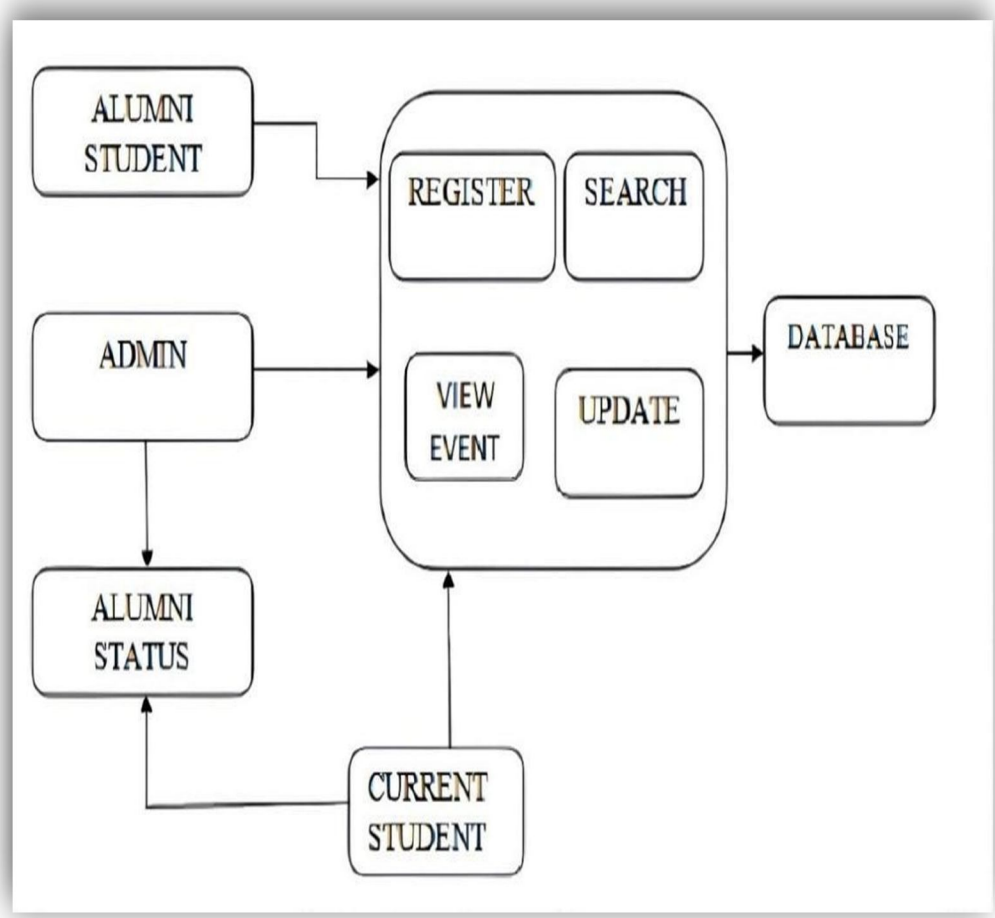


Figure : System Design

The graph illustrates the process inflow of the Alumni Association Platform, with a focus on stoner commerce. Alumni are suitable to register, search for classmates, and admit updates about events — establishing their connection with the institution. Admins authenticate alumni information, control biographies, and change event information in order to keep the system streamlined. Being scholars also use the platform to authenticate alumni biographies and event information to foster mentorship and networking. A central database maintains all operations by securely storing stoner information and easing smooth, effective, and organized system operation.

A. System Workflow

The image shows a flowchart diagram representing the structure and workflow of the Alumni Tracking System for the alumni's and the admin.

1) Registration/ Login — Alumni register and log in safely.
2) Profile Management — druggies fill in particular, academic, and professional information.
3) Networking & Search — Alumni hunt for and get connected with others by batch, assiduity, or position.
4) Admin Control — Admins manage stoner biographies, events, and point content.
5) Chat Section — Alumni are suitable to sputter and communication with each other

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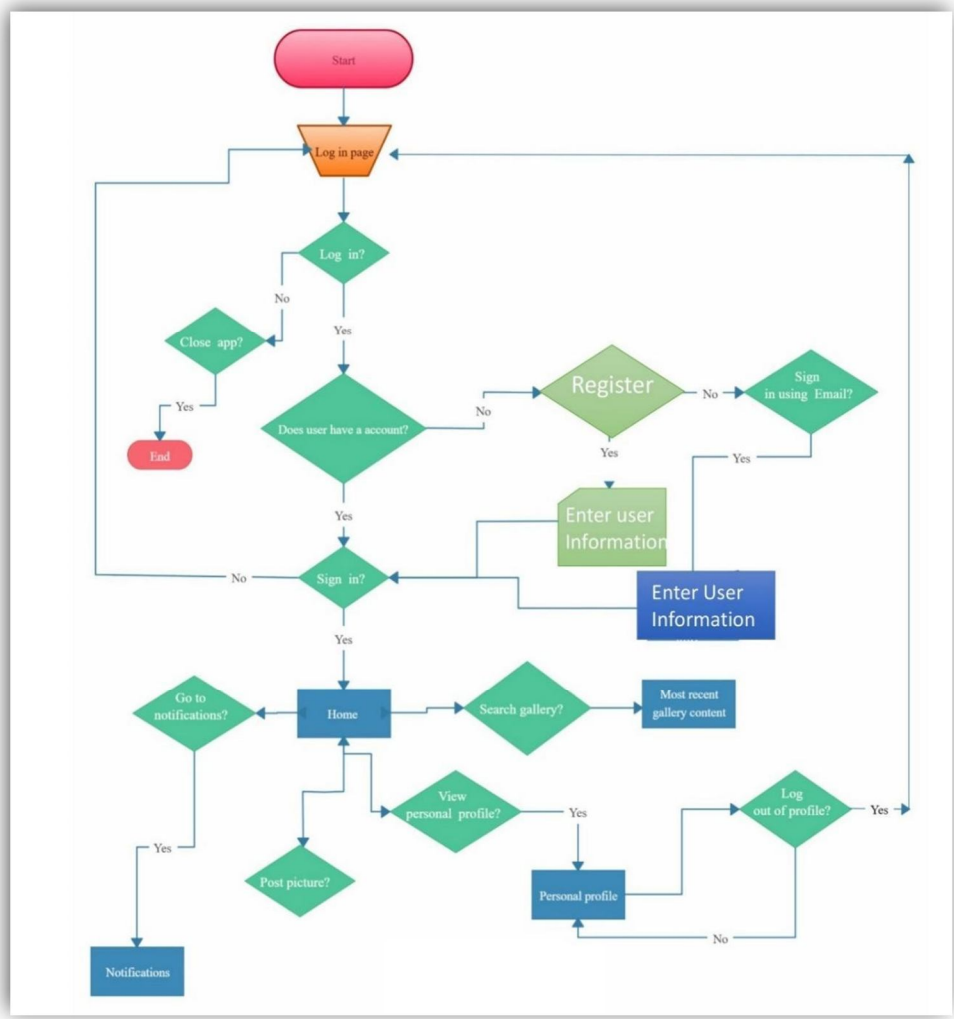


Figure : Flowchart for Alumni Tracking System

B. Alumni Registration & Verification

Alumni start by registering with information similar as name, time of scale, course, and dispatch. They establish a secure login, and an identity evidence dispatch verifies their account. After verification, they can pierce networking, events, and mentorship programs adding their connection with the institution.

C. Logging In & Profile Management

Once vindicated, alumni can log in to manage their biographies that contain particular, academic, and professional information similar as job function and accomplishments. They can also see their history of engagement, like events attended or mentorships. Information kept current, like contact information, instruments, and social media links, aids in bettered networking and collaboration.

D. Posts, Likes, commentary & Saved

Alumni members can post updates and openings and interact with each other through likes and commentary. A" Saved" option enables druggies to mark precious posts as important so that they're kept up to date.

E. System Flow Summary

The system begins with enrollment and authentication, and also login and active participation. druggies modernize biographies, post, and interact with peers — creating a thriving alumni community after scale.

VII. RESULTS AND DISCUSSION

We have created an alumni tracking system called Grad Connect to assist us in keeping good contact with our college alumni. The system provides a means by which current students can communicate with alumni, forming a solid link between students and graduates. The following are some screenshots that emphasize the design and functionality of our website.

The Alumni Tracking System is a web-based platform designed to strengthen connections between alumni and current students, facilitating career tracking, mentorship, and job opportunities. Traditional alumni management methods are inefficient, and this system provides a structured, digital solution for maintaining alumni records, tracking career progress, and enhancing institutional engagement.

Feature	Description
Secure Registration	Users can sign up and log in securely using role-based authentication.
Profile Management	Alumni and students can manage and update their personal and career information.
Networking Tools	Enables communication and mentorship between students and alumni.
Job Postings	Alumni and companies can share job opportunities for students and peers.
Event Management	Colleges can organize alumni meetups, webinars, and networking events.
Real-time Chat	Allows instant messaging and discussions between users.
Admin Panel	Helps institutions manage user roles, view analytics, and moderate content.
Data Utilization	Colleges use alumni data for feedback, curriculum improvement, and branding.

The system is developed using ReactJS, NodeJS, ExpressJS, and MongoDB, ensuring scalability and responsiveness. Key features include secure registration, profile management, networking tools, job postings, event organization, and real-time communication. Institutions can leverage alumni data for feedback, curriculum improvement, and branding, while alumni benefit from professional networking and continuous engagement with their alma mater.

VIII. CONCLUSION

The Alumni Tracking System strengthens institutional- alumni connections by furnishing a formalized platform for networking, career monitoring, and engagement. By combining technologies similar as AI, blockchain, and data analytics, it facilitates mentorship, observers' success, and increases alumni engagement. This is profitable to institutions in that it measures program goods and benefits alumni by furnishing job news, event cautions, and professional connections. With functionality similar as flawless chatting and easy access, alumni will remain in touch and come members of a community. With technology development, these types of systems will come critical in maintaining lasting bonds and institutional expansion.

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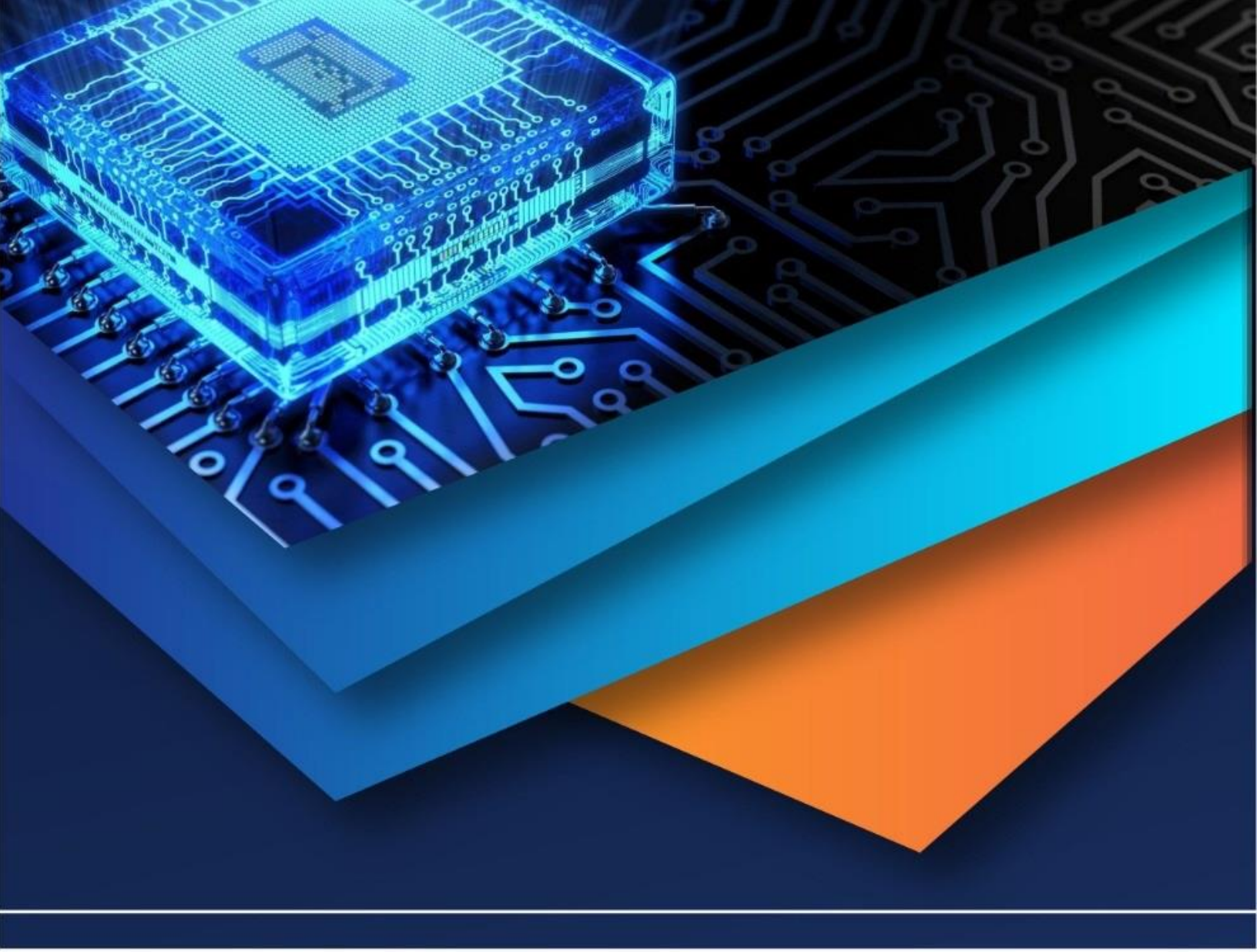
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REFERENCES

[1] D. Mijic and D. Jankovic, "Towards Improvement of the Study Programme Quality: Alumni Tracking Information System," in ICT Innovations 2011, L. Kocarev, Ed. Berlin, Heidelberg: Springer Berlin Heidelberg, 2012, pp. 291–300.
[2] Centralised Alumni Management System (CAMS) - A Prototype Proposal Aritra Mukherjee1, Adrita Roy2, Manish Kumar Lath3, Arnab Ghosal4, Diganta Sengupta5.
[3] K.J. Dochen, The University of Texas Elementary School: designing an alumnus tracking system. (2012).
[4] Mijic D., Jankovic D. (2012) Towards Improvement of the Study Programme Quality: Alumni Tracking Information System. In: Kocarev L. (eds) ICT Innovations 2011. ICT Innovations 2011. Advances in Intelligent and Soft Computing, vol. 150. Springer, Berlin, Heidelberg.
[5] Alegado, L. (2015). Online Alumni Information System Satisfies Alumni in an Educational Institution in Cebu City, Philippines. JPAIR Institutional Research ISSN-2244-1824.

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[6] "ASMSI - Sisters of Mary School Online Alumni System," Asmsi.org.ph. [Online]. Available: http://www.asmsi.org.ph/. [Accessed: 15 Nov 2019].
[7] Mihir Jayavant. et. al., "Alumni Tracking System," Iosrjen.org. [Online]. Available: http://iosrjen.org/Papers/Conf.ICIATE-2018/Volume-8/17- 80-86.pdf. [Accessed: 20 Oct 2019].
[8] Nikita Mithapelli, Snehal Chavan, Jyoti Kumari, "Alumni Tracking Using Google Map API and Social Media Based on GPS and LBS" DOI 10.4010/2016.593 ISSN 2321 3361 © 2016 IJESC
[9] D. Dai and Y. Lan, "The Alumni Information Management Model Based on "Internet+,"" 7th International Conference on Education, Management, Information and Mechanical Engineering (EMIM 2017), Advances in Computer Science Research (ACSR), vol. 76, 2017. [Accessed 10 December 2019].
[10] Rattanamethawong, V., Sinthupinyo, S., & Chandrachai, E. (2015). An innovation system that can quickly respond to the needs of students and alumni. Procedia - Social and Behavioural Sciences, 182. doi: 10.1016/j.sbspro.2015.04
[11] A. C. Z. Lousada and G. d. A. Martins, "Alumni as a source of information to management accounting courses (in portuguese)," Journal of Accounting and Finance, vol. 16, no. 37, pp. 73–84, 2005.
[12] S. Agarwal and R. Verma, "Alumni Tracking System: A Case Study on Educational Institutes," International Journal of Computer Applications, vol. 115, no. 14, pp. 20-27, 2015.
[13] A. K. Sharma, "A Web-Based Alumni Information System Using PHP and MySQL," International Journal of Emerging Trends & Technology in Computer Science (IJETTCS), vol. 4, no. 2, pp. 100-107, 2014.
[14] A. K. Sharma, "A Web-Based Alumni Information System Using PHP and MySQL," *International Journal of Emerging Trends & Technology in Computer Science (IJETTCS)*, vol. 4, no. 2, pp. 100–107, 2014.
[15] S. B. Patel, P. K. Patel, and M. K. Joshi, "Developing an Integrated Alumni Management System for Higher Education Institutions," *Journal of Education and Research*, vol. 7, no. 2, pp. 180–192, 2019.



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