



# A Student - Alumni Networking and Career Development Platform

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**Abstract.** The Student-Alumni Networking and Career Development Platform will serve as a link between students and alumni to foster mutual development. It will not only store students' and alumni's details, but it also provides a communication environment between them so that they can share their knowledge. For this, a profile will have their career history, skills and academic log. It suggests alumni to connect with based on the skills, domain, and location. An AI chatbot is used to guide people. One of the important features is that it consists of a verification module to keep the account safe and find out the fake accounts. This website is used to help graduate students get a job. The students who do not get any proper guidance from alumni may face difficulties in finding employment. So, these alumni websites provide connection and also provide good guidance and motivation to the students. This system supports students by exploring career options and improving their career plans.

**Keywords:** Student Alumni Website, Alumni Management System, Networking, Mentorship, AI Chat-bot, Career Guidance

## 1 Introduction

The Student Alumni Networking and Career Development Platform is a Java full stack website for linking students and alumni. It provides a secure and smart online platform where graduates and alumni communicate easily. It is designed mainly to share professional and career-related content among users. It has AI suggestions and chatbot assistance. It will create profiles and collect information based on their roles. In this creation process admin will validate the profile to reduce fake accounts.

It maintains a strong link between the student and alumni due to its interactive behavior. It will reduce ambiguity in career decisions and automatically support institutional growth. It will store student and alumni details and suggest the mentors and jobs

with their interests. It provides AI assistance like a support center while facing issues in registration or login process.

This system is cost effective as it uses open-source tools and does not require expensive hardware or license. The advantages of this platform are improved career support for student, networking, ensures reliability and scalability. It is user friendly website. Admins, students and alumni can easily adopt the system.

## 2 Literature Review

- The authors introduced a smart system [1]. It is used to match the students with mentors through AI. It is the best platform for conversation between students and mentors. Even though the system contains basic data handling features, it does not provide sufficient security mechanisms to completely protect the data.
- The author studied about building a community [2]. But people feel so worried about privacy and do not always use the site. It gives good progress on how to build a good community among the people. They do not integrate AI tools and chatbot functionality.
- The author researched on very general websites based on students and alumni [3]. They found that all those sites are used for basic talking and they become old fashioned. But it doesn't have AI or a smart system to guide the students.
- The author made a platform with mostly AI suggestions [4]. The system focus on minor parts of networking functionality and doesn't consider about major component security.
- The author built a mobile- friendly app called "Campus Connect" [5]. It was good for basic messaging and sharing jobs, but it wasn't "intelligent". It didn't have AI recommendations or the high-level security features.
- The author design a web platform for storing alumni information [6]. This alumni data in the network will guide the students for their career, but it doesn't concern about live chat and networking for interaction.
- The author made a platform that tracks the alumni using web mining techniques [7]. they focus on data mining of other data related to alumni over the social media. but it lacks in management activities.
- The author made research on efficient student alumni system using advanced web technologies [8]. He mainly focuses on secured authentication, messaging module. He uses React JS and Spring Boot for developing web application.
- The author introduced an AI driven Mentor-ship platform for optimized and efficient mentoring [9]. It is good for mentoring but lacks in security of data from cyber- attacks.
- The author designed a web-based system for managing alumni activities and data [10]. They are providing centralized system. It causes single point of failure.

- The author focus on the major gap between academic curriculum and industries requirements [11]. They point to key point in the education which leads to effective student career guidance.
- The author introduced an AI career guidance platform [12]. It uses AI to overcome the demerits of traditional methods of student engagement with alumni.
- The author developed a cloud-based alumni networking system with real time analytics [13]. It will perform tasks like networking, mentoring, jobs and event management.
- The author designed a web portal connects the graduates and current students [14]. It helps graduates to share their experience and can suggest their guidance and job updates to students.
- The author implemented a career development platform [15]. The platform will guide the students to choose better career options based on their interest and skills they have and students need not to worry about path they just follow the instruction.
- The author developed a full stack web application [16]. This application is result of using react JS and angular for experiencing well for users who interact with it.

### 3 Methodology

This platform follows a structured and modular approach to ensure scalability, security and ease of maintenance. This platform is classified into several functional categories, with each module developed to its requirements.

#### 3.1 Methodology Overview

The proposed methodology follows a three-layer architecture consisting of a frontend layer, backend layer, and database layer to develop an efficient alumni–student interaction platform. The frontend layer is implemented using React JS and provides separate dashboards for students, alumni, and administrators, enabling role-based access and user interaction. These dashboards communicate with the backend through HTTP requests. The backend layer is developed using Spring Boot and operates through a REST API Gateway that manages request routing, authentication, and service coordination. A Security and Verification Module ensures secure user authentication and verifies authorized access before processing requests. The system further integrates specialized services such as AI Chatbot Service for answering FAQs and providing career guidance, Mentorship Logic for managing mentor–mentee interactions, and Job & Event Service for handling career opportunities and event management. All application data, including user profiles, mentorship details, career information, jobs, and event records, are stored and retrieved from a MySQL database. This layered methodology ensures scalability, security, modularity, and efficient data management for the overall platform.

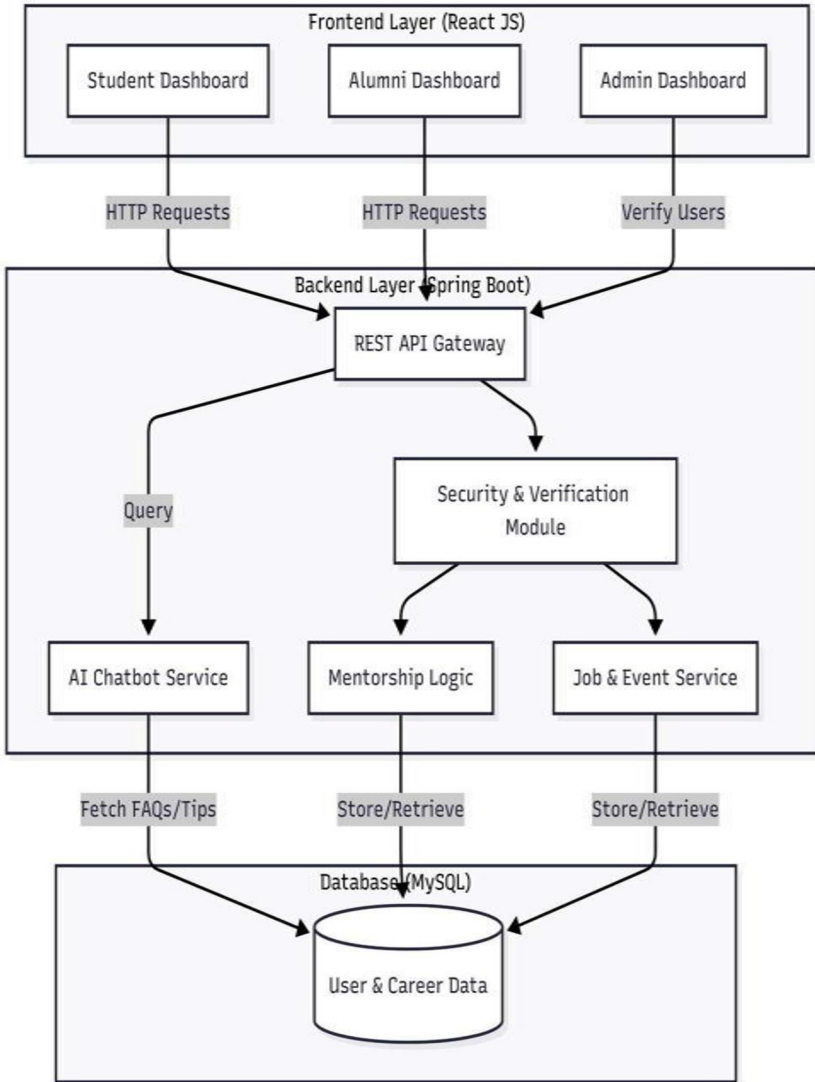


Fig. 1. Methodology overview diagram for the student alumni networking platform

### 3.2 Requirement Analysis

Requirement analysis was used to fulfil the needs of all stakeholders, including students, alumni, and administrators. Functional requirements are user registration, mentorship, job posting. Some of the use cases are designed to understand user interactions with the system. Based on these requirements, the Full Stack Java technology stack was finalized to meet system objectives efficiently.

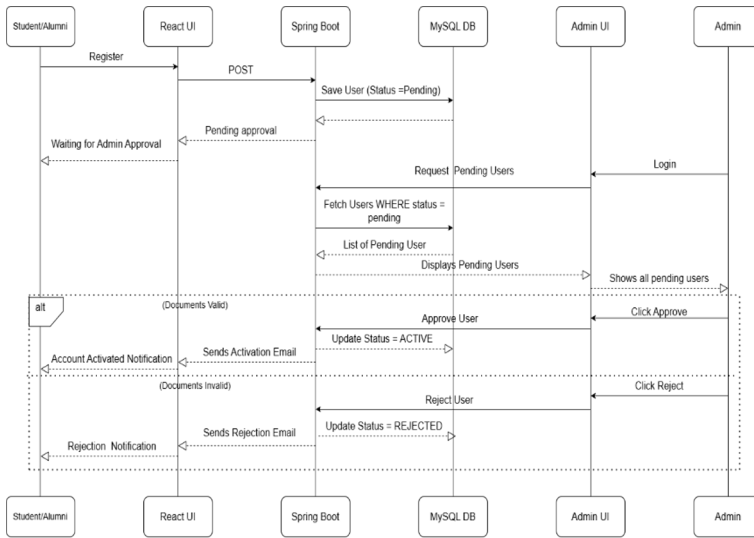


Fig. 2 Requirement analysis process diagram

### 3.3 Frontend Development

The frontend development is the application used to develop the frontend we can create a responsive and user-friendly interface. It consists of several key components such as login and registration forms, profile pages, dashboards, and job and event listings are implemented in this website. The design mainly focuses on usability and accessibility. For ensuring smooth navigation and screen sizes.

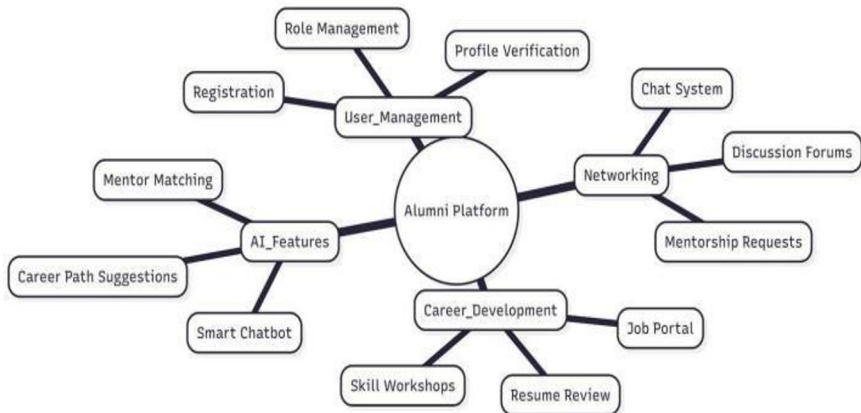


Fig. 3. Frontend development components architecture

### **3.4 Backend Development**

The backend is developed using Spring Boot to implement core and system functionality. RESTful APIs are created to handle communication between the frontend and backend. The frontend is integrated with the backend using HTTP requests, enabling dynamic data exchange and real-time updates.

### **3.5 Database Design**

The database design is used based on MySQL for storing the large amount of data and managing the data. It consists of tables for users, profiles, mentorship requests, job details and events. It also consists of database normalization techniques. This technique is used to eliminate redundancy and ensure data integrity. It also maintains consistency and support for efficient data processing.

### **3.6 Chatbot AI Module Integration**

An AI chatbot module is used to give advanced features to the website than the previous websites based on alumni. It consists of system analyzers; these analyzers analyze the interests of the students like skills and career goals and provide job opportunities. It also solves the asked questions and provides responses related to registration, placements and events.

## **4 Result**

The proposed web application creates an ecosystem that offers many advantages to students and alumni. The platform supports student career development by connecting with professionals who may offer real world mentorship and job referrals. This is mutually beneficial, as it provides improved alumni engagement, allowing graduates to give back to their formal institutions in a meaningful way. To make sure this connection happens in a secure environment, the web application enhances trust and reliability by using verification module to minimize face profiles. The platform provides efficient administrations by automating the heavy lifting of organizing events and job posting. It also offers the scalability to grow.

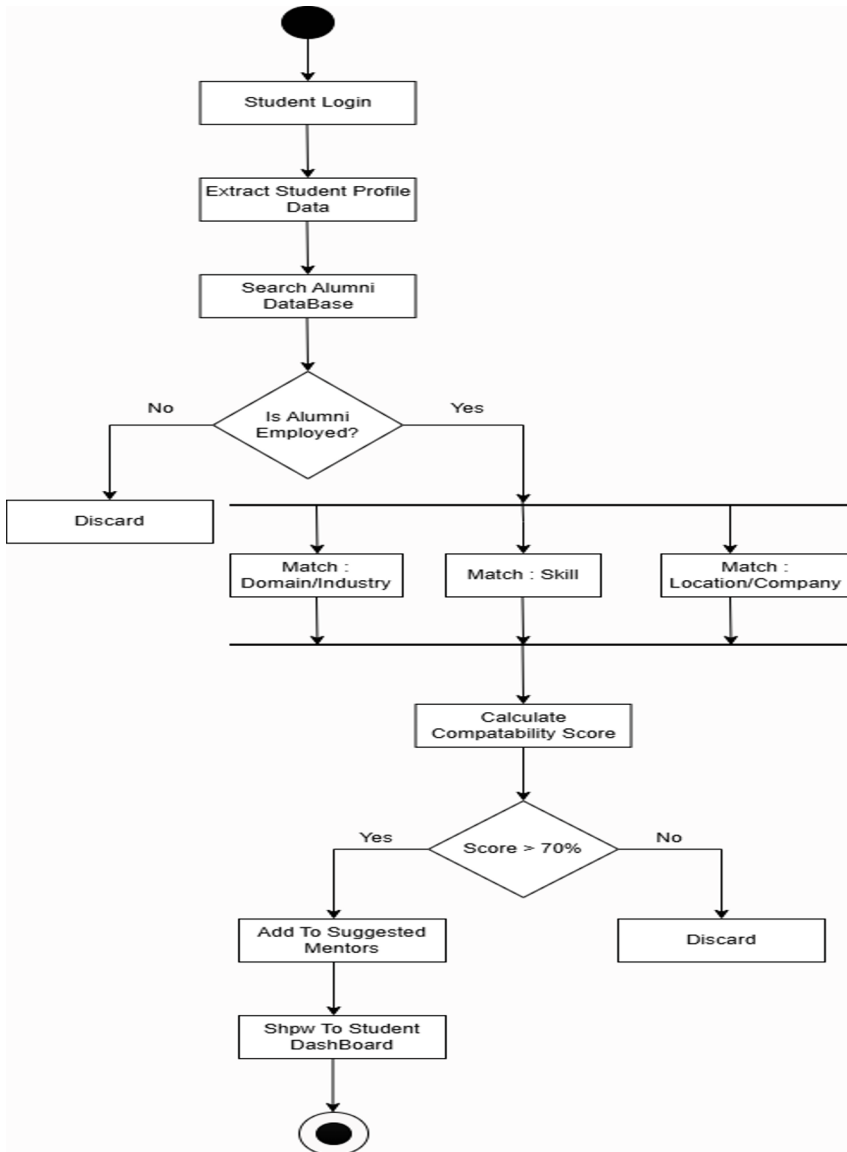


Fig. 4. AI chatbot module integration diagram

## 5 Discussion

The biggest challenge that most of the students face now-a-days isn't just about getting a degree, but finding a way into the professional world. This web application helps to

address the problem by facilitating a digital community where students can connect and learn from graduates who have already succeeded. Instead of just displaying a list of names, the web application uses smart technology to suggest best mentors and job opportunities for a student based on their goal. The proposed web application also integrates a strong verification system to ensure that every profile is real, this creates a safe and trustworthy space for students. Ultimately, this website converts and alumni network into a tool that helps students to find their path while keeping graduates connected to their old institution. The major problem it solves is that many students have skills but they don't have any idea about their path to first job. Through this web application, students can easily interact with graduates who are already working in their dream companies.

Because this web application is built with java full stack, it has better technical feasibility. It suggests relevant alumni connections based on student skills, domain, location with alumni profiles. It also integrates a security layer that acts like a digital gatekeeper, making sure only real students and graduates can enter into the web application. This takes away the fear of fake profiles and makes networking feel much more secure. By putting mentorship, job alerts, and expert advice all in one place, this web application ensures that no student has to start their career journey alone.

## 6 Conclusion

The student alumni website is helpful to students and mentors for their future. By using smart technology like AI and chatbot we can provide a safe and easy way of connections among the students and graduates. This website provides a direct platform for students who are seeking job opportunities. So, I conclude that using a dedicated website instead of general social media websites can provide better results for everyone. This website's main theme is to ensure that no student has to start their career journey alone. Students get the mentorship they need, alumni have a meaningful way to give back, and it builds a stronger, more connected professional network. This website helps students to explore employment opportunities and useful for their job search process. This gives a chance to move from college to work place easily for every student.

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