



# Shikshak Recruitment

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## Abstract

The College Faculty Recruitment System is an Android-based application designed to simplify the hiring process by organizing candidates and facilitating tests within the app. Those who pass the exam are put on the college's short list for additional assessment phases, where their total performance determines their final selection.

Because so many resumes are sent in unstructured formats, recruitment can be challenging for HR departments and employment locations. This makes manual evaluation and assessment more difficult. Companies have started utilising automated recruitment methods to cut expenses, effort, and time while continuing to address these issues. As an example, by using such technologies, SAT Telecom was able to reduce the cost of hiring by 44% and the hiring process from 70 days to 37 days.

The system aims to tackle the challenge of selecting qualified candidates from a large applicant pool. Manual recruitment can be time-consuming, leading to rushed decisions and possibly overlooking the best talent. This automated approach seeks to streamline the process by quickly identifying and selecting skilled candidates, regardless of location. By doing so, it ensures that hiring decisions are made more efficiently and effectively, enhancing the overall recruitment experience for both employers and job seekers.

## Keywords

Automated recruitment; Candidate evaluation; Hiring efficiency; Faculty recruitment system; Application-based hiring; user engagement.

## 1. INTRODUCTION

The World Wide Web and the Internet have entirely altered how people use and share information. Nowadays, the process for placement can be handled online, and anybody having the right username and password may use it inside or outside of an organization. Training and Placement Officers (TPOs) may efficiently handle student placement data by using these platforms. The current online recruitment system offers an easier and controlled method that can replace manual methods, while maintaining key examination functionalities. In addition to being user-friendly, this multi-platform system is flexible sufficient to allow for future improvements. It acts as a vital conduit between employers and job applicants, helping employers in finding qualified individuals while helping students in finding suitable possibilities. Traditional manual methods still present a number of challenges such as poor information management, slow operations, and a high rate of error. Poor communication places students at risk of losing out on opportunities for employment, and placement officials have more work to do in terms of keeping accurate records and informing students.

The objective of the suggested Online Training and Placement System is to increase the efficiency of the placement process. The system will make sure that all timetables and assignments are displayed to students, and users will find it easy to edit and access information. The TPO will manage applications, look for qualified students in accordance with business specifications, and inform users via email of any developments. With access to their accounts, alumni will be able to stay in touch through forums and help out current students. Overall efficiency, data management, and communication will be significantly improved by the new system.

### 1.1.Purpose

The goal of the suggested Online Training and Placement System is to increase the efficiency of the placement procedure. The system will make sure that all timetables and activities are visible to students, and users will find it easy to modify and access information. The TPO will oversee applications, look for qualified students in accordance with business requirements, and notify recipients via email of any developments. With access to their accounts, alumni will be able to stay in contact through communities and help out current students. All around efficiency, data management, and communication will be greatly improved by the new system.

### 1.2 System development life cycle



Figure 1.4. System development life cycle

A recruiting system's System Development Life Cycle (SDLC) typically consists of the following key stages:

1. Preparation and Needs Gathering: This first stage involves defining the goals, parameters, and specific needs of the process of hiring. In order to determine if the project can be completed within the organization's financial and schedule limitations, the team also conducts a feasibility assessment.
2. Design: In this stage, the database, interface for users, architecture, and other technical components of the system are described. To evaluate and enhance the efficiency and accessibility of the system, the team might also create a working model.

3. **Development:** Based on the requirements defined in the previous stages, the system's real coding is now started. Continuous testing is done throughout development to make sure the system performs as planned and conforms with
4. **Testing:** To find and fix shortcomings a variety of tests are carried out, such as unit, integrating, and system evaluations. This guarantees that the system satisfies every user and business requirements and works as intended.
5. **Deployment:** During this stage, the technology is put into effect in a live setting. This could entail creating user roles, moving data, as well as making sure the system is ready for its intended audience.
6. **Maintenance:** To guarantee optimal performance after deployment, the team keeps a close eye on the system. Updates and improvements are applied on a regular basis to fix issues and introduce new features as needed.

By adhering to these SDLC stages, it is essential to guarantee that the process for hiring is created and executed effectively, reducing risks and taking immediate action to solve concerns.

## 2. Literature Survey

The Shikshak Recruitment system seeks to streamline and digitize the recruitment process for educational institutions. The foundation and justification for this system can be traced through several existing research contributions:

### 2.1 Online Placement Systems

Priyanka Hajare et al. [1] proposed an **Online Placement System** that digitizes the campus placement process. The study highlighted how automation can overcome challenges such as inefficiencies in communication, manual data management, and scheduling. Similarly, Nilesh Rathod et al. [3] developed an interactive web-based platform for training and placement that significantly reduced the workload of placement officers. These works validate the importance of automated platforms, like the one proposed in *Shikshak Recruitment*, which digitizes every aspect from resume collection to final selection.

### 2.2 Decision Tree Algorithms in Recruitment

In their study, T. Jeevalatha et al. [2] analyzed student placement data using decision tree algorithms. The work illustrates how **data mining and machine learning techniques** can be applied to assess and select the best candidates based on academic and skill-based parameters. This aligns with the proposed system's use of automated screening modules to shortlist qualified candidates quickly and accurately.

### 2.2 Algorithmic Design for Recruitment Systems

Jiming Lan and Shengnan Xu [4] focused on algorithm design for college talent recruitment systems. Their research emphasized reducing the recruitment cycle by introducing well-structured digital workflows, from job posting to candidate selection. The *Shikshak Recruitment* system mirrors this structured approach, offering clearly defined modules for each stage of hiring, thereby saving time and resources.

### 2.4 Use of Fuzzy Logic for Faculty Evaluation

Baokun Pang et al. [6] applied **fuzzy theory** to evaluate and recruit university interpretation teachers. Their model accounted for subjective aspects of evaluation (e.g., communication skills, teaching style) using fuzzy logic, leading to a more nuanced and accurate assessment. The *Shikshak* system can benefit from such an approach in its interview and performance assessment modules by incorporating intelligent scoring mechanisms.

### 2.5 Integration of Mobile Agents and MVC Frameworks

Li Yang et al. [9] and Kristof Geebelen et al. [10] discussed integrating **mobile agents** and **MVC (Model-View-Controller) frameworks** to improve modularity and user experience in web applications. These architectural insights are applicable to the *Shikshak Recruitment* system, which aims to offer a scalable, maintainable, and cross-platform solution accessible through Android and web interfaces.

### 2.6 Security and Data Sensitivity in Recruitment Systems

V. Jain et al. [15] proposed the use of **blockchain and AI** to enhance data security in sensitive applications. This is highly relevant to recruitment systems, which manage confidential candidate data. The proposed system could incorporate blockchain for secure data logging and AI for intelligent decision-

making, making it both robust and transparent.

## 2.7 Crowdsourced and Mobile-based Recruitment Models

Studies by Zongjian He et al. [5], G. Chatzimilioudis et al. [12], and E. Koukoumidis et al. [13] explored **mobile crowdsourcing** and **predictive analytics** for smart recruitment systems. These models facilitate recruitment through mobile apps, enabling real-time interactions between candidates and recruiters. The *Shikshak* system, being Android-based, follows a similar model, aiming to expand outreach and reduce geographical constraints in hiring faculty.

### 3. Proposed Methodology

The *Shikshak Recruitment* system is designed to modernize and simplify the hiring process for educational institutions, particularly when recruiting faculty members. Traditional hiring methods are often time-consuming, paper-heavy, and prone to miscommunication. This system offers a streamlined, automated approach using a user-friendly Android application, backed by a structured web-based backend.

#### 3.1 Job Posting Made Easy

In the traditional system, job openings were posted on notice boards, websites, or sent manually to potential applicants. This system transforms that into a **one-click digital process**:

- Authorized users (like administrators or recruitment officers) can create job listings through the app.
- Listings include important information such as department, required qualifications, experience, job responsibilities, and deadlines.
- These postings are immediately visible to potential applicants on the app, ensuring timely communication and maximum reach.

#### 3.2 Application Collection and Tracking

Applicants no longer have to deal with clunky paper forms or confusing portals. Through the app, they can:

- Register and fill out their personal and professional details.
- Upload documents such as resumes, academic certificates, cover letters, and ID proofs.
- View and track their application status in real-time.

For recruiters:

- All applications are neatly organized and stored in a centralized digital database.
- They can filter, sort, and search applications easily.

#### 3.3 Automated Screening

Manually checking dozens or hundreds of resumes is exhausting and inefficient. That's where **automated screening** comes in:

- The system uses predefined criteria (like qualifications, experience, skills) to **auto-filter candidates**.
- Only those who meet the basic requirements are moved to the next round.
- This feature saves recruiters from sifting through irrelevant applications and ensures fair preliminary selection.

#### 3.4 Interview Scheduling

Coordinating interviews manually often results in conflicts, delays, or missed communication. The system automates this:

- Recruiters can set up interview time slots within the platform.
- Candidates receive instant notifications with date, time, and instructions.
- Both sides can confirm availability, and interviews can be rescheduled if needed.

#### 3.5 Performance Evaluation

After interviews, recruiters can use the platform to:

- Record interview feedback and ratings.
- Evaluate candidates based on multiple parameters such as subject knowledge, communication skills, teaching aptitude, etc.
- Compare candidates fairly with a standardized evaluation system.

### 3.6 Offer and Onboarding

Once a candidate is selected:

- The system sends out a digital job offer.
- Candidates can accept or reject the offer through the app.
- If accepted, onboarding begins automatically: uploading joining documents, accessing institution policies, and receiving orientation schedules.

### 3.7 Data Management and Reporting

All data captured throughout the recruitment process is:

- Stored securely in a centralized database.
- Accessible for generating detailed reports (e.g., number of applicants, time to hire, interview scores).
- Useful for analyzing and improving future recruitment cycles.

## 4.UML diagram

An approach for recognizing and defining the various exchanges that take place between users (actors) and the system is use case analysis. Comprehensive scenarios of the system's interactions with actors are provided, helping in the definition of the functional requirements. Here is an illustration of a case study analysis for a hiring system.:

### 4.1. Use Case Description

The hiring managers, recruiters, and job applicants are the main players in the recruiting system as displayed in the use case diagram. The main use cases cover tasks like posting job openings, going over candidate resumes, arranging interviews, making job offers, and monitoring the entire hiring procedure. The associated diagram of activities shows the procedures in the hiring process, from posting a position to making a job offer.

The manager of recruitment drafts a job ad at the start of the activity diagram, which is then posted on employment boards and social media. Job searchers read through these job advertisements and apply. After reviewing the resumes, the recruiter selects the best applicants for interviews. Interviews are arranged by the recruiter, and the hiring manager usually plays part in them. Following the interview process, the hiring manager and recruiter discuss which candidate is the best fit. The chosen candidate receives an offer of employment from the hiring manager, which they may agree to or reject.

Utilizing activity diagramming and use case analysis guarantees that the recruitment system supports a successful hiring process and is in line with the needs of the organization. The organization may attract top talent and increase performance by implementing this structured analysis to improve the recruitment process.

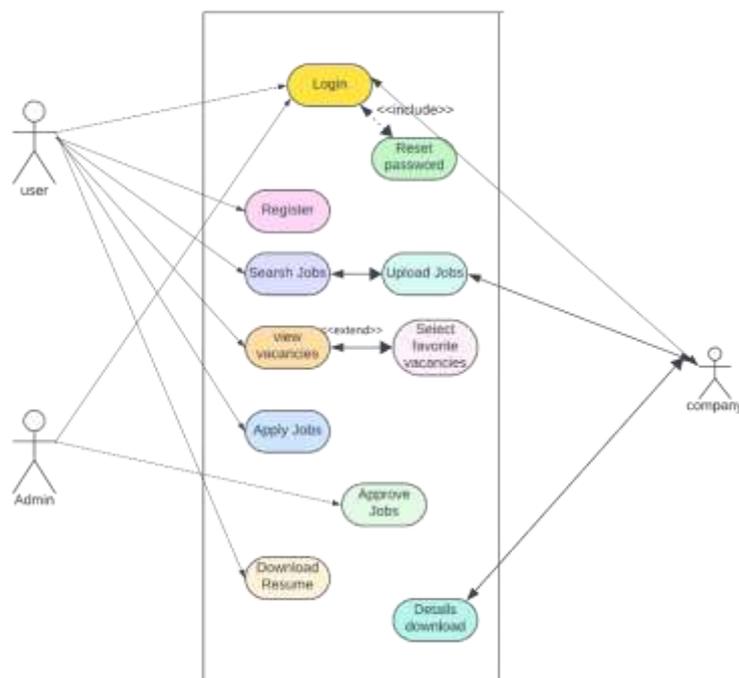


Figure:4.1. use case diagram

## 4.2 Activity Diagram

The hiring managers, recruiters, and job searchers are the main players in the recruiting process, as shown in the use case diagram. Posting jobs, evaluating applicants, arranging interviews, extending offers, and handling the hiring procedure are some of the primary responsibilities. The processes involved in this process are outlined in the activity diagram, which goes from creating a job listing to making a job offer.

The hiring manager starts the process by posting a job opening on many job boards and social media networks. After that, job searchers register for the role. After looking over the applications, the recruiter selects a few candidates for interviews. The recruiter conducts interviews, frequently working with the recruiting manager. They discuss and select the best candidate after the interviews. The selected candidate is then given the opportunity to accept or decline the job offer from the hiring manager.

Utilizing use case and activity diagrams, the company makes sure the system for hiring meets its goals and makes the hiring process go more easily. This analysis simplifies hiring, draws in the best employees, and increases overall performance for the business.

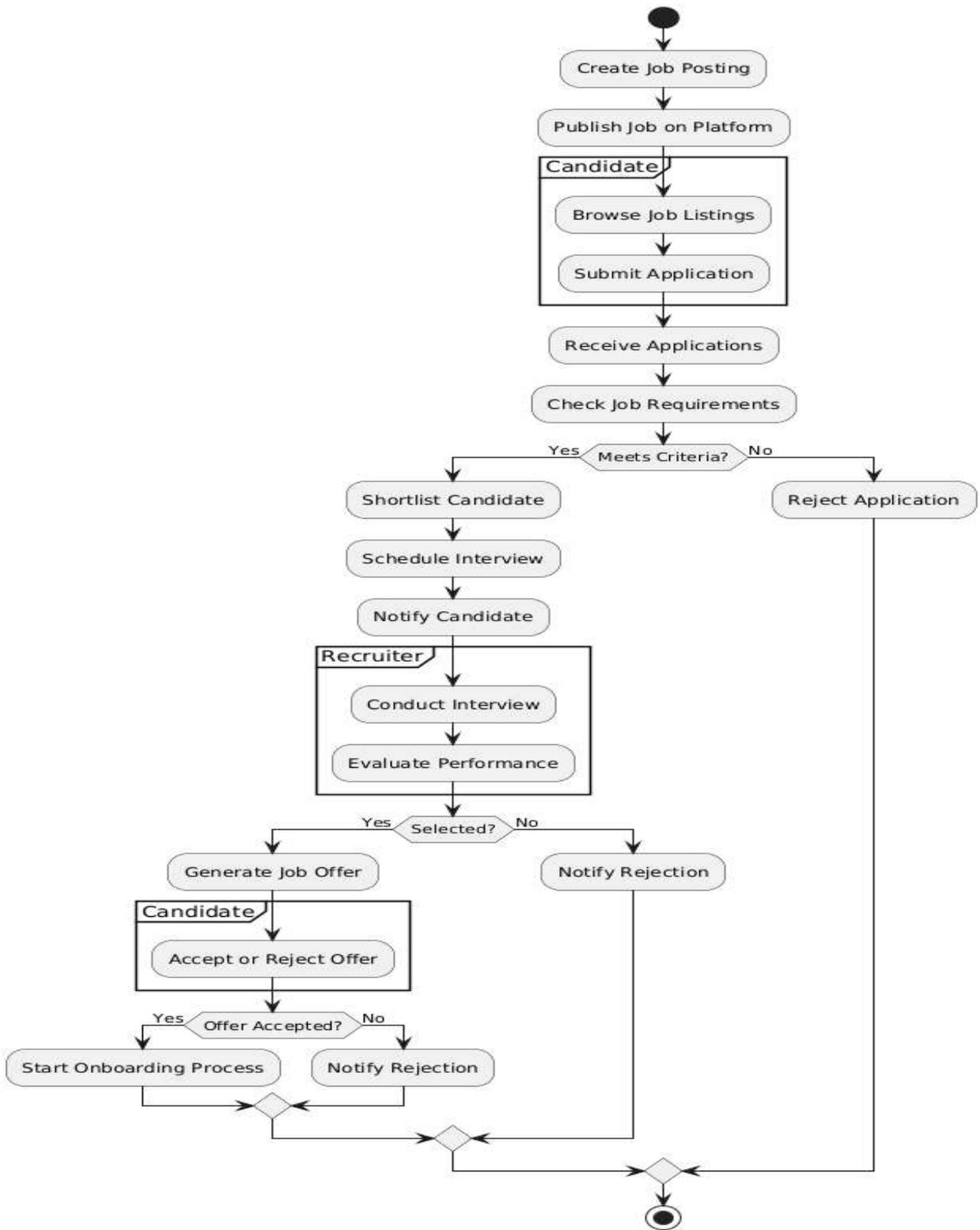


Figure. 4.2 Activity diagram

5.DESIGN

5.1.System Flow Diagram

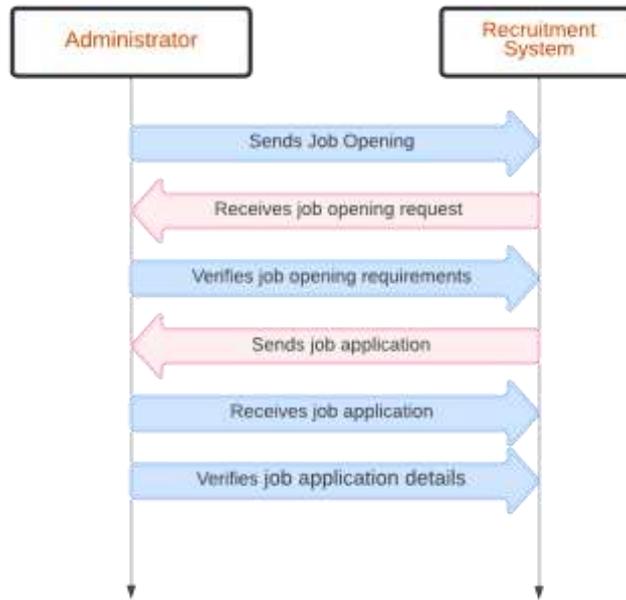


Figure 5.1. System Flow Diagram

The system checks that the job requirements have been fulfilled before allowing applications. In this instance, the Administrator requests a job position from the Recruitment System after receiving applications. Interviews are scheduled via the system, which also notifies applicants of their scheduled times. After the interviews, the applicants' performance has been assessed by the system. The hiring decision is made by the system based on this assessment, and the candidate is informed of the result.

5.2. Data Flow Diagram

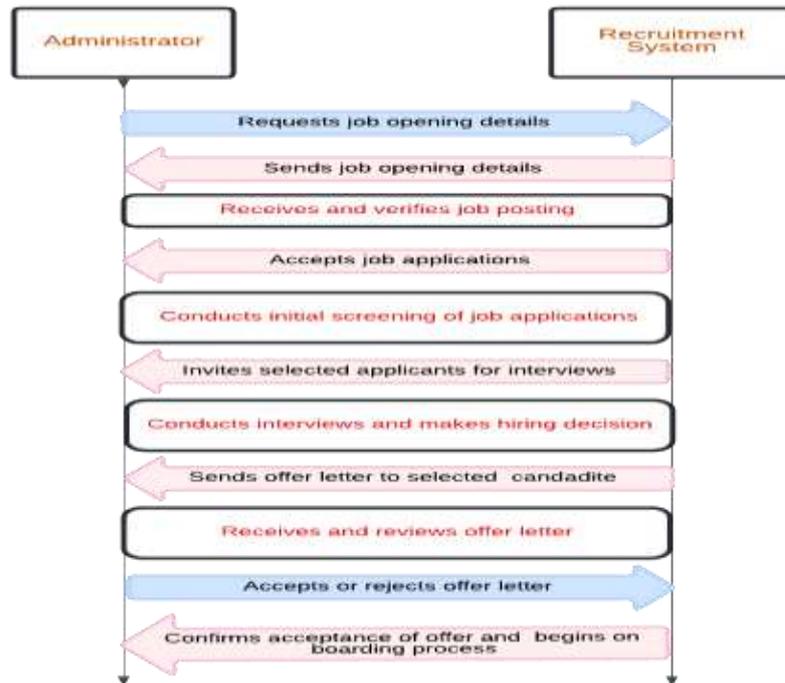


figure 5.2. Data Flow Diagram

The system pauses application processing until it checks that every job requirement are currently fulfilled. In this case, after receiving applications, an Administrator contacts the Recruitment System to request a job vacancy. The system is used to arrange interviews and notifies candidates of their assigned times. The system has evaluated the performance of the applicants following the interviews. Based on this evaluation, a hiring choice is made by the system, and the candidate gets informed of the outcome.

## 6. Scope

With its extensive scope, the project gives you: -

- i. complete automation of the placement process.
- ii. Removing work that requires paper.
- iii. Increased accuracy as well as effectiveness.
- iv. Simplified administration of placement results and student information.

## 7. Project Goals

1. Organize and keep student resumes online.
2. Lessen the amount of work to give TPOs and students extra time.
3. Give simple entry to information.
4. Get rid of false entries.
5. Make certain that only students who qualified apply for places.
6. Raise the accuracy of the outcome analysis.
7. Create a system design that is simple to use.

## 8. CONCLUSION

The time and effort required for recruitment processes can be fell candidate quality of applications may improve, the screening process can be made more transparent and objective, and data-driven choice making can be made feasible with the help of a well-thought-out and performed faculty recruitment system. Furthermore, by drawing in and keeping the greatest talent, it can assist colleges and universities in keeping a competitive edge in the job market.

In general, educational institutions can enhance their faculty hiring results and streamline their recruitment procedures through the implementation of a faculty recruitment system. The suggested approach automated online user registration, user activation and deactivation, user individualization, online resource clause, user communication, and online review. The administrator has access to user data and will verify it. The admin will also create a student list according to company standards, offer the user entry to company facts, find and filter data, and generate reporting. Data about graduates can be kept up to date. The training and placements department's whole process is computerized. The task of guaranteeing quality in a teaching and learning environment is laborious. There isn't any particular program available to keep learning environments compliant with standards of quality. A excellent operational solution for teaching environment is offered by online recruiting management systems.

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