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Hirelink: A Web Based Campus Recruitment Platform

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ABSTRACT: ***In most academic institutions, campus recruitment processes are handled manually, involving repetitive tasks, paperwork, and miscommunication between students, recruiters, and Training and Placement Officers (TPOs)[1], [7]. These inefficiencies often lead to data loss, delays, and a lack of transparency. This paper proposes*** *HireLink – a web-based campus recruitment platform****, a digital solution designed to automate and streamline the placement process. HireLink offers modules for student registration, job posting, drive management, resume generation, and analytics dashboards, as well as an alumni portal for mentorship and networking. Developed using*** React.js, Django, and MySQL***, the platform ensures scalability, security, and responsiveness. By reducing manual work and enhancing coordination, HireLink is expected to improve efficiency, transparency, and data-driven decision-making in campus recruitment, laying the foundation for a modernized and centralized placement ecosystem[5].***

Keywords: Campus Recruitment, Web Application, Placement Automation, React.js, Django, Analytics Dashboard

I. INTRODUCTION

Campus recruitment plays a critical role in bridging the gap between educational institutions and industries, providing students with employment opportunities and enabling recruiters to identify suitable talent efficiently[1]. Traditionally, recruitment processes have relied heavily on manual methods, including paperwork, spreadsheets, and email communications, which often result in inefficiencies, miscommunication, delays, and loss of data. In recent years, several digital solutions have been proposed to automate parts of the recruitment workflow, including student registration, job postings, and drive management. However, many of these systems lack comprehensive integration, features such as round-wise selection tracking, analytics dashboards, and alumni mentorship portals, limiting their effectiveness.

To address these gaps, this paper introduces HireLink – a web-based campus recruitment platform designed to digitize and streamline the entire placement process. HireLink integrates student registration, resume generation, drive management, job posting, and analytics in a unified platform, while also including an alumni portal to facilitate mentorship and networking. By providing a centralized and automated system, HireLink aims to enhance coordination among students, recruiters, and Training and Placement Officers (TPOs), improve transparency, and support data-driven decision-making in campus recruitment.To overcome these limitations, HireLink is proposed as a centralized web-based platform integrating job posting, resume management, ATS-based shortlisting, analytics, and alumni interaction [3], [5], [6].

II. METHODOLOGY

This section describes the systematic approach followed for the design and development of **HireLink**, a web-based campus recruitment platform aimed at automating and streamlining the interaction between students, recruiters, and placement officers[6],[7].

System Overview

HireLink is designed to automate the traditional campus recruitment process by providing a centralized online platform that connects students, recruiters, and placement officers. The system eliminates manual coordination, reduces administrative workload, and ensures transparency in recruitment activities. The platform supports job posting, application tracking, resume shortlisting using ATS scores, notifications, analytics, and round-wise selection monitoring.

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A. System Modules

1) Student Module[1], [7].

- Student registration and login
- Profile creation including academic details and skills
- Resume upload and ATS score checking
- Connecting with alumni
- Viewing available companies and eligibility criteria
- Applying for jobs
- Calender integration
- Receiving notifications for shortlisting and interview rounds

2) Recruiter Module[3],[5]

- Recruiter registration and login
- Job posting with eligibility requirements
- Viewing student applications
- ATS score-based resume shortlisting
- Scheduling interview rounds
- Sending selection or rejection notifications

3) Admin / Placement Officer Module[5],[6].

- Monitoring overall system activity
- Managing users and job postings
- Viewing analytics dashboards
- Tracking round-wise student selection
- Managing alumni information
- Calendar integration for recruitment events

B. Workflow and Process Flow

Students register and log into the system, complete their profiles, and upload resumes. They can browse job postings, check eligibility criteria, and apply for suitable positions. Application status and interview updates are displayed on the student dashboard[1],[7].

Recruiters log in and post job openings with specific eligibility conditions. The system automatically filters applications based on criteria and ATS scores. Recruiters can shortlist candidates, conduct interviews, and update selection status[3],[5].

The admin or placement officer supervises all recruitment activities, manages users, posts announcements, monitors analytics, and ensures smooth execution of the recruitment process[5],[6].

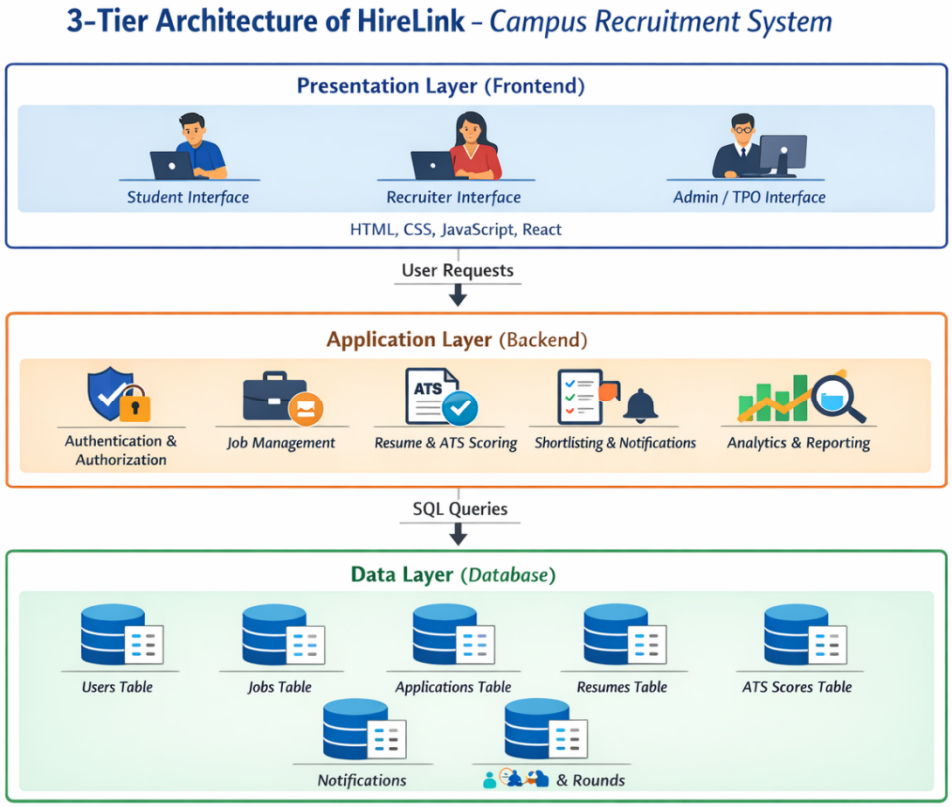
Data Handling and Storage[4].

The system manages structured data including:

- Student academic records, skills, and resumes
- Recruiter job postings and eligibility requirements
- Application status and interview round details
- Notification logs and analytics data

All data is securely stored in a **MySQL database**, ensuring consistency and integrity

C. Architecture Diagram.



Fig(1) - 3-Tier Architecture[5]

1) Presentation Layer:

This layer provides the efficient user interface for interaction with the HireLink system. It includes separate dashboards for **Students, Recruiters, and Admin/Placement Officers (TPO)**, allowing users to register, log in, view available job opportunities, check eligibility criteria, upload resumes, apply for jobs, and track application status. Recruiters can post job openings, view applicants, and manage shortlisting processes, while Admin/TPO users can monitor overall system activities, manage users, and view placement analytics. The Presentation Layer focuses on usability, responsiveness, and accessibility to ensure a smooth user experience.

2) Application Layer:

The Application Layer handles the core processing and business logic of the system. It is responsible for user authentication and role-based access control, job and application management, resume parsing and **ATS (Applicant** Tracking System) score calculation, shortlisting of candidates, notification generation, and analytics processing. This layer processes all requests received from the Presentation Layer and communicates with the Data Layer to store and retrieve required information. It ensures that business rules are correctly applied and that system operations are executed securely and efficiently.

3) Data Layer:

The Data Layer is responsible for storing, organizing, and managing all system data. It consists of a relational database server that stores user profiles, job details, applications, resumes, ATS scores, notifications, and selection round information. The Data Layer ensures data integrity, consistency, and reliability. It also supports backup and recovery mechanisms to prevent data loss and enable continuous system availability.

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4) Output Flow

The system delivers relevant outputs to users through role-specific dashboards. Students receive job recommendations, ATS scores, application status, and notifications. Recruiters receive applicant lists, ranked candidates based on ATS scores, and shortlisting results. Admin/TPO users receive placement statistics, analytics reports, and system activity summaries. These outputs assist stakeholders in making faster and more informed recruitment decisions.

III. RESULTS AND DISCUSSION

The development of HireLink successfully addresses the core inefficiencies found in traditional campus recruitment processes. The following outcomes were observed through the evaluation of the integrated system modules:

Process Automation: The platform successfully transitioned manual coordination tasks into a centralized digital workflow, significantly reducing the administrative workload for Training and Placement Officers (TPOs)[1].

Candidate Shortlisting: The integrated Application Tracking System (ATS) accurately processed resumes and calculated scores, allowing recruiters to shortlist candidates based on objective, skill-based criteria[3].

Data Integrity: By utilizing a MySQL-driven Data Layer, the system ensured that student academic records and interview round statuses remained consistent, secure, and easily retrievable[5].

Operational Transparency: Separate dashboards for students, recruiters, and admins provided real-time updates on application statuses, effectively eliminating previous communication gaps.

IV. CONCLUSION

HireLink provides a robust, web-based solution for modernizing the campus recruitment ecosystem. By utilizing a 3-tier architecture—consisting of a React.js frontend, a Django backend, and a MySQL database—the system ensures high performance, security, and scalability.

The project successfully automates critical placement activities, including student registration, job management, and round-wise selection tracking. Unlike traditional manual methods that rely on paperwork and spreadsheets, this centralized platform offers data-driven insights through analytics dashboards and supports professional networking via an alumni portal. Ultimately, HireLink creates a more efficient, transparent, and coordinated environment for students, recruiters, and educational institutions.

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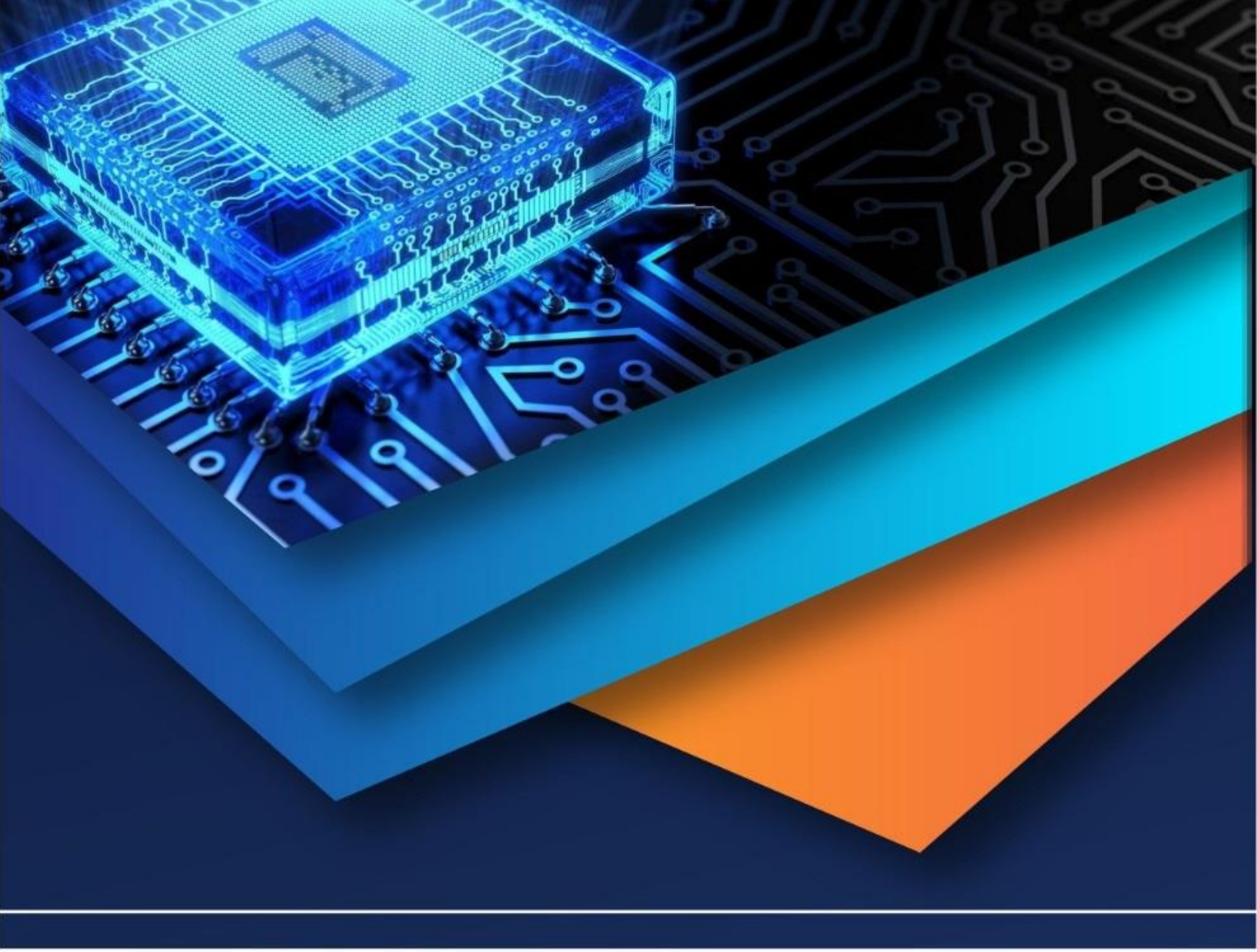

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