DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROJECT REVIEW : 2

TITLE: EduCareer: Smart Learning and Placement Analytics Hub

INTERNAL GUIDE NAME: Dr Thamba Meshach W

DESIGNATION: Head Of Department

PRESENTED BY

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AGENDA

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- **EXISTING & PROPOSED SYSTEM**
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PROBLEM STATEMENT

Educational institutions face significant challenges in managing placements due to fragmented communication, manual coordination, and a lack of real-time analytics. The reliance on emails, spreadsheets, and multiple platforms leads to inefficiencies such as miscommunication, delays in placements, and mismatched opportunities between students and recruiters. Tracking student profiles, company drives, and placement statistics manually is time-consuming and prone to errors. Additionally, students struggle to find relevant internships, courses, and hackathons as these resources are scattered across different platforms. Institutions also lack centralized data insights, making it difficult to analyze placement trends, skill gaps, and department-wise performance. These inefficiencies hinder effective decision-making, reduce placement success rates, and ultimately impact the institution's reputation.

ABSTRACT

Educational placement systems are transforming with digital solutions to effectively bridge the gap between students and employment opportunities. Our project, the EduCareer: Smart Learning and Placement Analytics Hub, embodies this evolution by integrating advanced web technologies into academic placement processes to enhance career readiness and institutional efficiency. The system is built on a robust architecture containing modules for student profiling, drive management, and analytics, enabling precise opportunity matching. By leveraging modern frameworks such as React.js for the frontend and Node.js with Express.js for the backend, the platform achieves seamless performance, making it ideal for integration into college placement cells and corporate recruitment systems to facilitate data-driven hiring practices. The proposed method eliminates dependency on paper-based processes and removes the need for fragmented communication, resulting in an optimized and transparent placement ecosystem efficiency.

INTRODUCTION

The integration of technology into placement management has become essential for educational institutions to efficiently organize and track student placements. Our application provides a comprehensive solution with centralized access to resources, company drive management, and placement analytics. Students, coordinators, and companies can securely register and manage placement activities through an intuitive interface. Placement coordinators can schedule, track, and analyze placement drives, while students can register for opportunities and submit their details.

With real-time data storage using MySQL and Firebase, our system maintains a robust database of student records, company details, and placement statistics. Coordinators gain valuable insights into placement trends, while students can explore tailored opportunities, including internships, courses, and hackathons.

By integrating advanced technology and best practices, our application enhances efficiency, transparency, and collaboration, creating a more organized and data-driven placement ecosystem.

LITERATURE SURVEY(RECENT MINIMUM 7 PAPERS)

Title	Authors	Summary	Limitations
Design Paper on Online Training and Placement System(OTaP) .	Nilesh T. Rathod and Seema Shah.	The paper analyzes the existing Training and Placement (T&P) system and proposes an online system (OTaP) to streamline student registrations, company interactions, and placement tracking, improving accessibility and automation.	The proposed system lacks real-time industry integration and has limited focus on AI-based job matching, with security and scalability concerns not extensively addressed.
A Secure and efficient Database Management System based on Integrated Statistical Data Analysis modelling and Privacy Preserving Analytics	GAYATHRI.A and THANGA REVATHI.S.	The paper proposes a secure and efficient database management system that integrates statistical data analysis modeling and privacy-preserving analytics. The system uses encryption and a web-based solution to enhance security.	The system's reliance on encryption may impact performance, and the web-based solution may be vulnerable to cyber-attacks.

Title	Authors	Summary	Limitations
Enhancing The User Experience of Portal Website using User-Centered Design Method	Rosa Ariani Sukamto, Yudi Wibisono, De Gitgit Agitya	The paper focuses on enhancing the user experience of a portal website using user-centered design methods to automate placement processes.	The user-centered design approach may be time-consuming and resource-intensive.
Virtual Machine Placement in Cloud Computing: Challenges, Research Gaps, and Future	Puneet Kaushal	The paper discusses the challenges of virtual machine placement in cloud computing, including energy efficiency, cost optimization, resource utilization, network bandwidth, and migration time.	The paper identifies research gaps but does not provide a comprehensive solution to address these challenges.
Role of Artificial Intelligence in Recruitment Process	Ashima Garg	The paper explores the impact of artificial intelligence on the recruitment process, examining how AI can improve efficiency, accuracy, and candidate experience.	The study may not fully address potential biases in AI-powered recruitment tools and their implications for fairness and diversity in hiring.

Title	Authors	Summary	Limitations
An Intelligent System for Automating Training and Placement Activities	Rakesh K., Priya M.	The paper proposes an intelligent system to automate training and placement activities, reducing manual effort and enhancing efficiency.	The system may require significant initial investment and technical expertise for implementation and maintenance.
A Data-Driven Approach to Predict Student Employability in Campus Recruitment	Meenal K., Arvind R	The paper proposes a data-driven approach using predictive analytics and machine learning to predict student employability based on academic records, skill sets, and past recruitment trends.	The accuracy of the predictive model may be limited by the quality and availability of data, and may not account for non-quantifiable factors influencing employability.

EXISTING AND PROPOSED SYSTEM

1. Centralized Data Management

Problem:

- Data scattered across WhatsApp, emails, and Google Forms.
- No single platform for student profiles, recruiter details, or job postings.

Solution:

- Centralized database for easy access and updates.
- Eliminates data loss and redundancy.

2. Real-Time Updates & Notifications

Problem:

- Manual updates via WhatsApp/email lead to missed deadlines.
- No real-time tracking of job postings or interview schedules.

Solution:

- Automated notifications for deadlines, interviews, and updates.
- Real-time dashboards for students and recruiters.

3. Professional User Experience
Problem:

- Informal communication via WhatsApp/Google Forms.
- Lack of a professional interface for recruiters and students.

Solution:

- Dedicated dashboards for students, recruiters, and placement cells.
- Enhances college reputation and user satisfaction.

4. Scalability & Cost Efficiency
Problem:

- WhatsApp/Google Forms not scalable for large numbers.
- Manual processes become chaotic and time-consuming.

Solution:

- Scalable platform for growing needs.
- Reduces long-term operational costs through automation.

SOFTWARE REQUIREMENTS

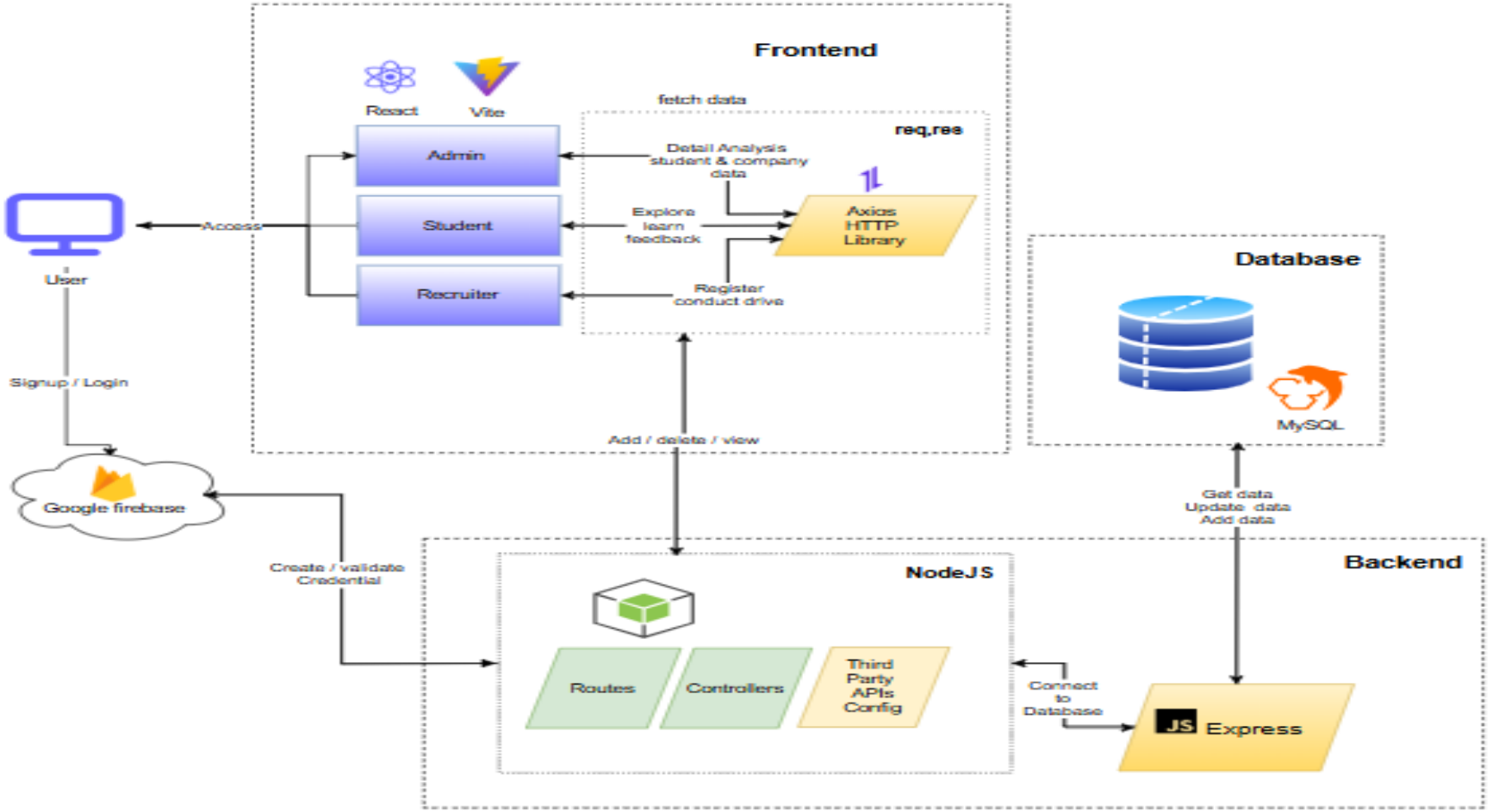
Hardware Requirements:

- Processor: Intel i5/i7
- RAM: 8GB+
- Storage: 256GB SSD or higher
- OS: Windows, macOS, Linux

Software Requirements:

- Operating System: Windows
- Development Tools: VS Code and GitHub
- Databases: MySQL (mysql2)and Firebase
- API Handling: Axios
- Libraries: React.js with Vite, Node.js, Express.js
- Image Processing:Multer
- Data Visualization:Chat.js

SYSTEM ARCHITECTURE DIAGRAM



MODULES LIST

LIST OF MODULES

1. User Authentication Module.
2. Student and Recruiter Management Module.
3. Placement Drive and Resource Management Module
4. Analytics and Reporting Module.
5. Database Management Module
6. Administrator Dashboard Module

RESULTS

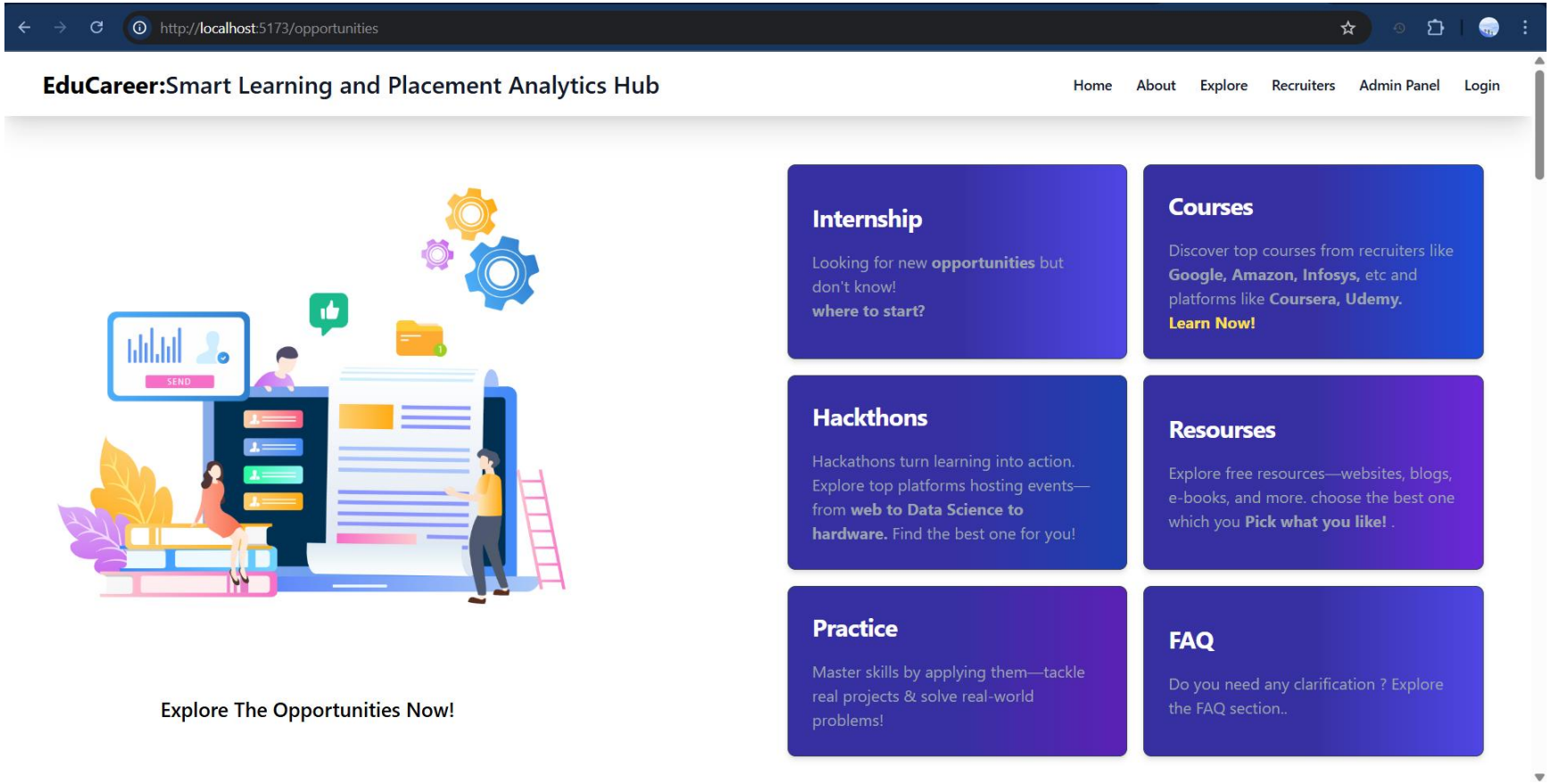


Fig 1: Student interface Hero Section

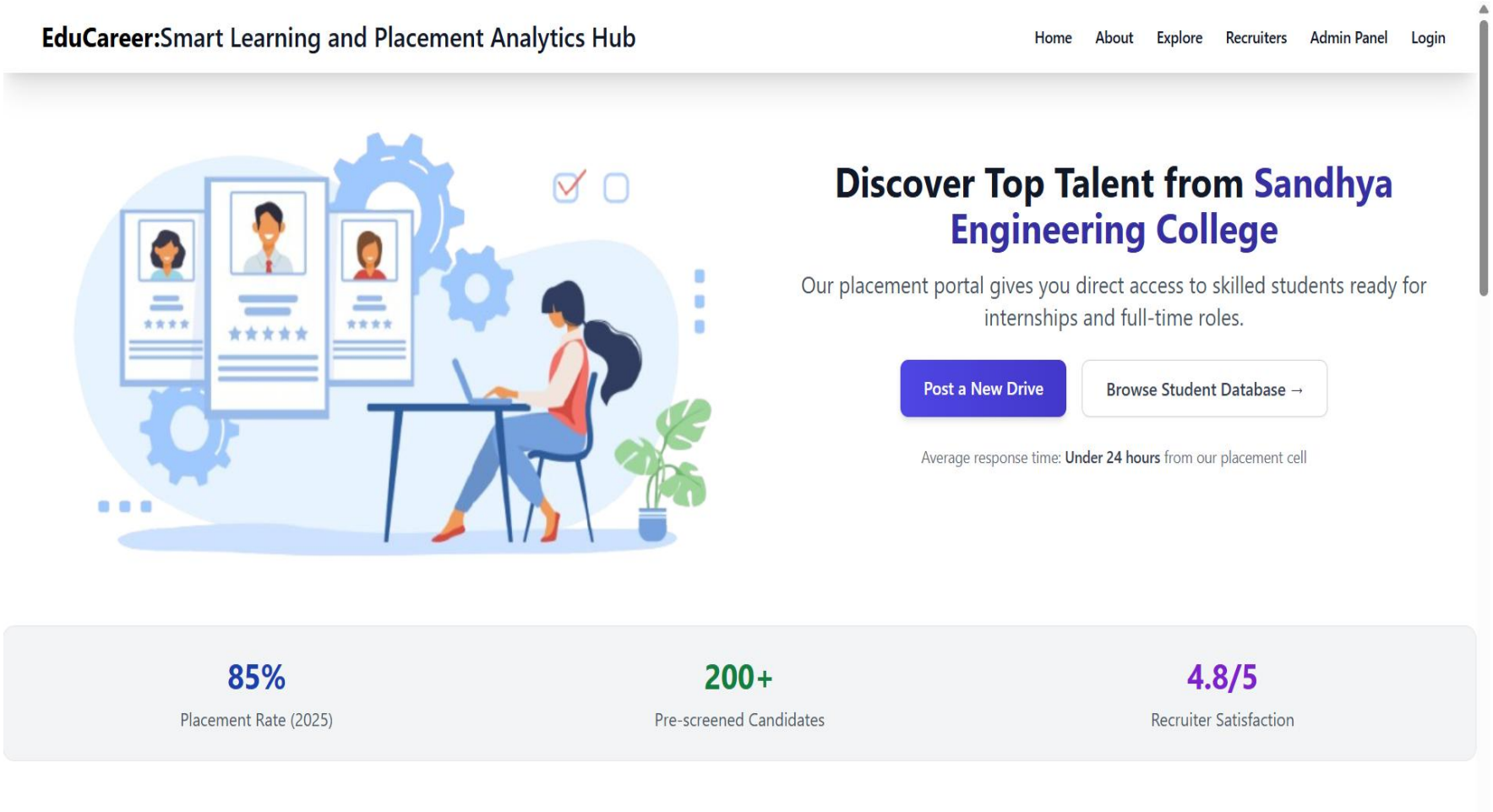


Fig 2: Recruiter interface Hero Section

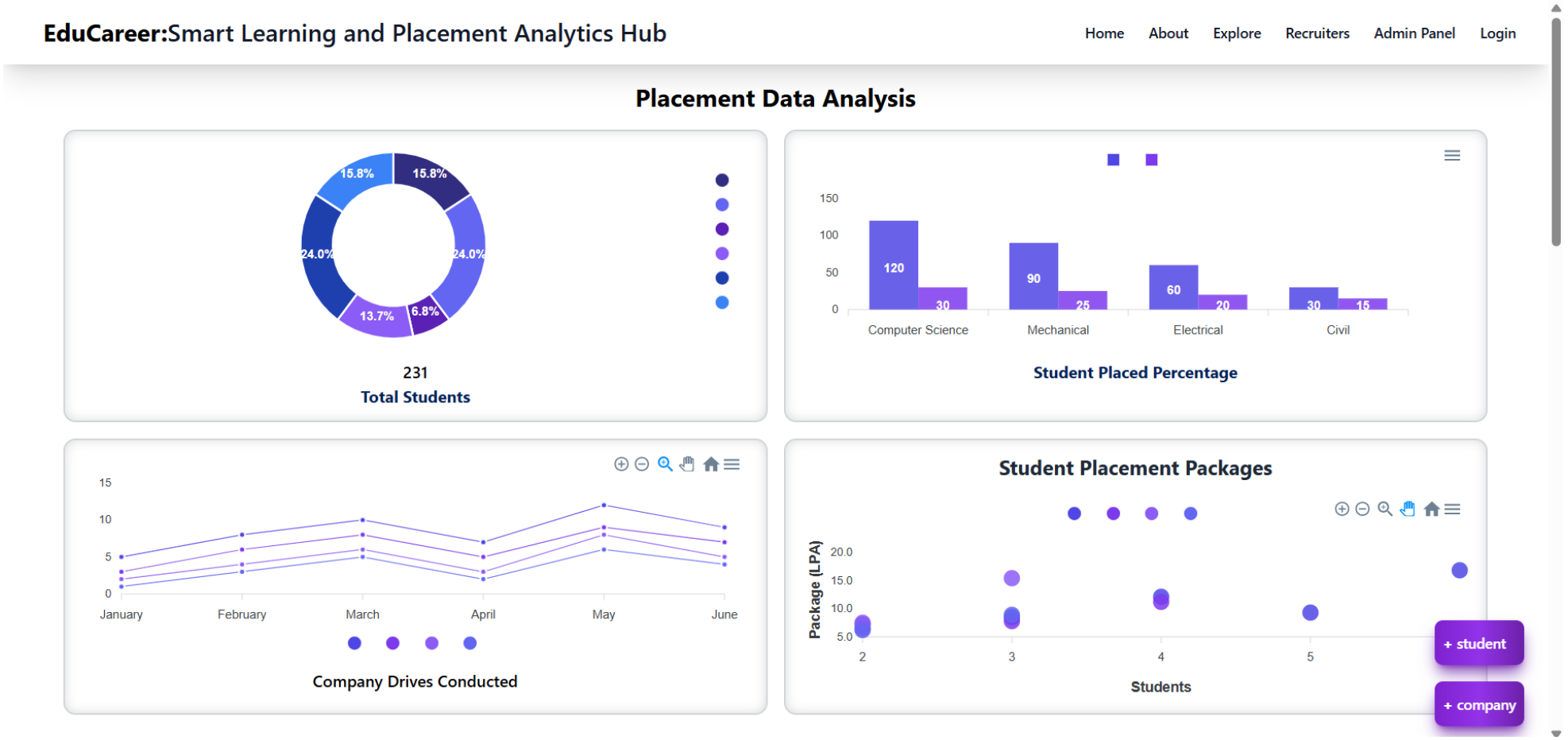


Fig 3: Admin interface Data Analysis

COMPANY / INTERNSHIP ACCEPTANCE LETTER AND WORKING ENVIRONMENT

Virtual Tech Services

Date: 03/02/2025

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. PRIYA T (Reg No: 111421104092)** studying **COMPUTER SCIENCE AND ENGINEERING** at **PRATHYUSHA ENGINEERING COLLEGE, CHENNAI – 602 025,** has been granted permission to do her **Full stack development** internship at our organization for the Limited period from **03.02.2025 to 15.04.2025**.

For VIRTUAL TECH SERVICES,

Authorized Signatory

Sri Nivas, A1, D.No - 7/10, Sarangapani St, Ambattur, Chennai - 600053
www.virtualtechz.in | info@virtualtechz.in | Ph : 98408 70197

SSPL

Letter of Intent

To :
Sunita Shakuniya
+91 9892479608
shakuniyasunita6@gmail.com
Mumbai, India.

Date :
5 February, 2025

We are pleased to offer you an Internship position at SSPL as a Fullstack Developer Intern. As an intern, you will undergo a training period of a minimum of 3 months. Upon successful completion of your training, you will transition into a stipend-based role, with an effective start date of 10 February 2025.

PLease make a note of the following details:

Date of Joining (DOJ): 10 February 2025

Reporting Time: 10:00 AM

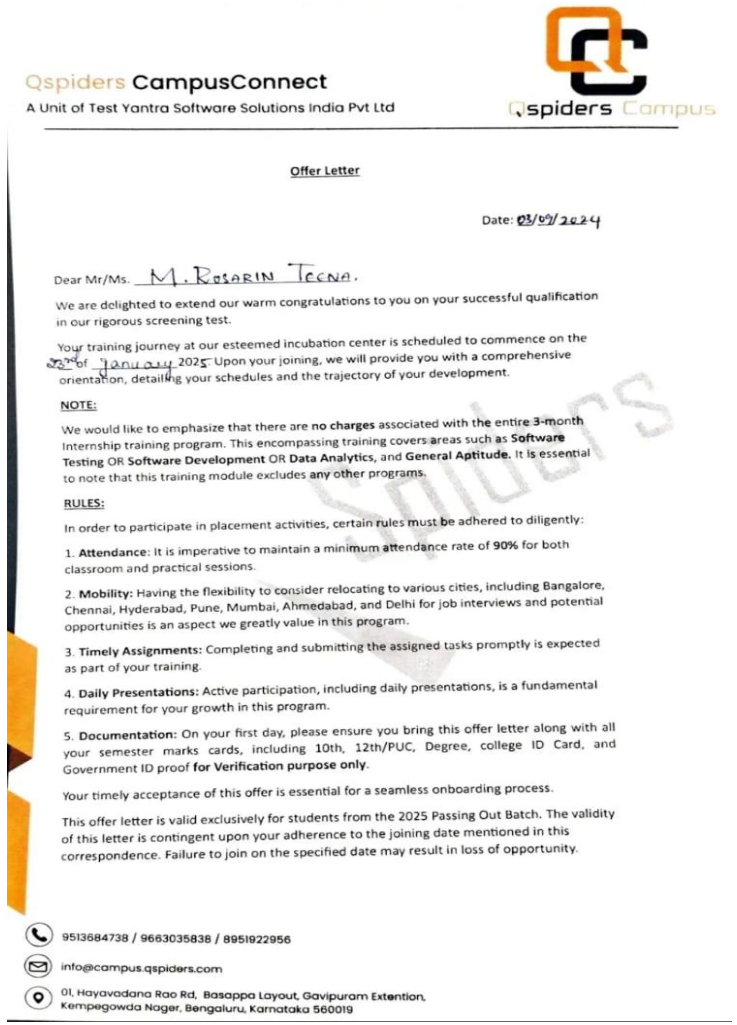
During your internship, you may be granted access to confidential information belonging to SSPL. By accepting this offer, you agree to maintain the confidentiality of all such information and adhere to SSPL's privacy policies

We appreciate your understanding and flexibility regarding the start date, and we are confident that this opportunity will mark a positive and rewarding start to your career with us.

Warm Regards,

Sundri Devi
Co - Founder

sspl
hr@shakuniya.in



Qspiders CampusConnect
A Unit of Test Yantra Software Solutions India Pvt Ltd

Qspiders Campus

Offer Letter

Date: 03/09/2024

Dear Mr/Ms. M. Rosarin Teena,

We are delighted to extend our warm congratulations to you on your successful qualification in our rigorous screening test.

Your training journey at our esteemed incubation center is scheduled to commence on the 22nd of January 2025. Upon your joining, we will provide you with a comprehensive orientation, detailing your schedules and the trajectory of your development.

NOTE:

We would like to emphasize that there are **no charges** associated with the entire 3-month Internship training program. This encompassing training covers areas such as **Software Testing** OR **Software Development** OR **Data Analytics**, and **General Aptitude.** It is essential to note that this training module excludes any other programs.

RULES:

In order to participate in placement activities, certain rules must be adhered to diligently:

1. **Attendance**: It is imperative to maintain a minimum attendance rate of **90%** for both classroom and practical sessions.
2. **Mobility:** Having the flexibility to consider relocating to various cities, including Bangalore, Chennai, Hyderabad, Pune, Mumbai, Ahmedabad, and Delhi for job interviews and potential opportunities is an aspect we greatly value in this program.
3. **Timely Assignments:** Completing and submitting the assigned tasks promptly is expected as part of your training.
4. **Daily Presentations:** Active participation, including daily presentations, is a fundamental requirement for your growth in this program.
5. **Documentation:** On your first day, please ensure you bring this offer letter along with all your semester marks cards, including 10th, 12th/PUC, Degree, college ID Card, and Government ID proof **for Verification purpose only**.

Your timely acceptance of this offer is essential for a seamless onboarding process.

This offer letter is valid exclusively for students from the 2025 Passing Out Batch. The validity of this letter is contingent upon your adherence to the joining date mentioned in this correspondence. Failure to join on the specified date may result in loss of opportunity.

9513684738 / 9663035838 / 8951922956
info@campus.qspiders.com
01, Hayavadana Rao Rd, Basappa Layout, Gavipuram Extention, Kempegowda Nagar, Bengaluru, Karnataka 560019

PROJECT OUTCOME OVERVIEW(Patent/Journal/Conference- Submitted/Accepted proof should be enclosed)

CONCLUSION

The **EDUCAREER:SMART LEARNING AND PLACEMENT ANALYTICS HUB** successfully streamlines the placement process by providing a unified platform for students, recruiters, and administrators. Through secure authentication, role-based access control, and seamless data management, the system enhances efficiency, transparency, and collaboration among stakeholders. Students benefit from an organized approach to updating profiles, tracking placement status, and accessing valuable learning resources, while recruiters can efficiently schedule drives and manage applications. The admin dashboard further enables data-driven decision-making with comprehensive analytics and reporting tools. Despite its success, the system has some limitations, such as dependency on MySQL for large datasets, limited integration with external platforms, and the absence of a mobile application. However, these limitations do not overshadow the significant advancements the system brings to the placement process.

PROJECT DEMO

GitHub code: Like