

# A Student-Centric Freelancing Platform for Bridging Academia and Industry

Sakshi Kate<sup>1</sup>, Om Kawale<sup>2</sup>, Pranav Belgamwar<sup>3</sup>, Piyush Ghore<sup>4</sup>, Prof. A.D.Tawlare<sup>5</sup>

<sup>1</sup>Department Of Information Technology, Sinhgad College Of Engineering, Pune-41 <sup>2</sup>Department Of Information Technology, Sinhgad College Of Engineering, Pune-41 <sup>3</sup>Department Of Information Technology, Sinhgad College Of Engineering, Pune-41 <sup>4</sup>Department Of Information Technology, Sinhgad College Of Engineering, Pune-41

Email: sakshi.kate.scoe.it@gmail.com

\*\*\*

**Abstract** - In today's competitive environment, students often struggle to gain practical experience due to limited access to real-world projects and the dominance of experienced professionals on existing freelancing platforms. This paper presents the design and development of a student-centric freelancing and hiring platform exclusively for verified students, aimed at connecting academia with industry. The system enables students to register using their institutional credentials, create professional profiles, and apply for jobs, internships, or projects posted by employers. It ensures fair opportunities by restricting participation to verified students and promotes skill development through motivational features such as ratings, rewards, and skill badges. The platform is developed using React.js and Node.js, offering a secure, user-friendly, and scalable web application hosted on Vercel. The proposed system not only bridges the gap between students and employers but also encourages continuous learning, practical exposure, and career growth. Experimental evaluation and user feedback demonstrate the platform's effectiveness in enhancing student employability and facilitating efficient talent discovery for recruiters.

**Key Words:** Freelancing Platform, Student Verification, Web Application, Skill Development, Internship Opportunities, Employer-Student Interaction, Career Growth, Industry Collaboration, Ratings and Rewards, Secure Authentication.

## 1. INTRODUCTION

In the evolving digital ecosystem, students encounter considerable barriers in acquiring practical exposure and industry-relevant experience due to the dominance of seasoned professionals on mainstream freelancing platforms. This imbalance limits opportunities for emerging talent to engage in meaningful projects that align with their academic learning. To mitigate this gap, the proposed student-centric freelancing platform serves as a dedicated digital ecosystem exclusively for verified students, enabling them to showcase their skills, collaborate on projects, and gain experiential learning through real-world engagements. The system

incorporates institutional verification to ensure authenticity and fairness while integrating motivational features such as ratings, rewards, and skill badges to foster continuous learning and participation. Developed using React.js and Node.js, the platform emphasizes scalability, security, and user experience. By bridging academia and industry, this initiative not only democratizes access to professional opportunities for students but also empowers employers to discover emerging talent, thereby fostering innovation, employability, and sustainable academic-industry collaboration.

## 2. LITERATURE SURVEY

[1] Studies on existing freelancing platforms such as Upwork and Fiverr highlight that while they provide global access to work opportunities, they primarily favor experienced professionals. Students often struggle to compete due to limited portfolios and lack of credibility verification, resulting in fewer chances to gain practical exposure.

[2] Research emphasizes that the gap between academic learning and industrial requirements is widening. According to educational studies, students need real-world project experiences to develop employability skills and align their capabilities with industry expectations.

[3] Scholars have found that integrating gamification elements like badges, points, and ratings increases user engagement, motivation, and learning efficiency. Incorporating such features in online systems enhances participation and performance among students.

[4] Security and authenticity are crucial in online collaboration. Literature on digital identity management supports using institutional email verification to ensure genuine user participation, thereby increasing trust between students and employers in digital platforms.

[5] Previous research on web technologies such as React.js and Node.js demonstrates their capability to build scalable, interactive, and secure web applications.

These technologies have been successfully used to create educational and professional collaboration systems, validating their use in this project's architecture.

### 3. OVERVIEW

The proposed Student-Centric Freelancing Platform serves as an innovative web-based system designed to connect verified students with employers, offering them real-world opportunities through internships, projects, and freelance jobs. The platform ensures authenticity through institutional verification and promotes skill development through ratings, rewards, and badges. It aims to bridge the gap between academic knowledge and industry application by creating a secure, scalable, and user-friendly environment that benefits both students and employers.

#### 1. Objective:

To provide a secure freelancing and hiring platform exclusively for verified students. To bridge the gap between academia and industry by offering students real-world project exposure. To promote fair opportunities, skill enhancement, and professional growth among students.

#### 2. Core Components:

Student Module: Profile creation, job search, application, and earning ratings or badges. Employer Module: Job posting, candidate review. Admin Module: User verification, report monitoring, and system maintenance. Database: Securely stores user, job, and application data for smooth operation.

#### 3. Working Principle:

Students register using institutional email or ID for verification. Employers post projects or internships with skill requirements. Students apply based on interests and skills. Admin validates users and manages system activities. The system uses feedback, ratings, and rewards to maintain engagement and performance tracking.

#### 4. Accessibility and Innovation:

Web-based and easily accessible from any internet-enabled device. Built using React.js (frontend) and

Node.js (backend) ensuring scalability and speed. Incorporates gamification (ratings, rewards, badges) for continuous motivation. Promotes innovation by merging technology, education, and employment on one platform.

#### 5. Social Impact:

Empowers students by offering practical learning and industry exposure. Strengthens collaboration between academia and industry. Reduces inequality in job opportunities for students lacking experience. Encourages a skill-driven, inclusive digital ecosystem beneficial to students and employers alike.

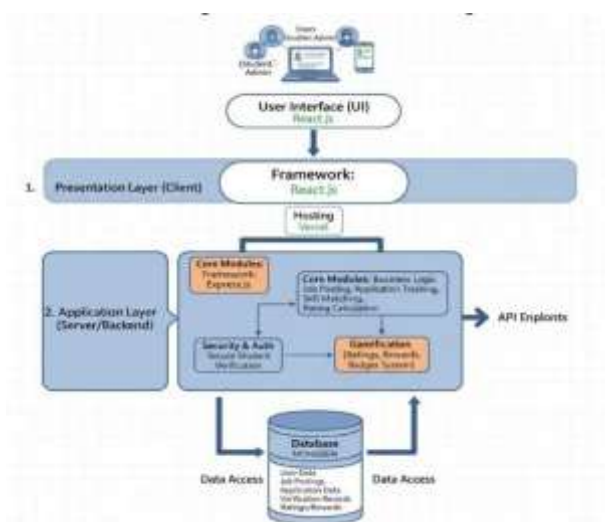


Fig 1: Architecture Diagram of System

### 4. METHODOLOGY

The development of the Student-Centric Freelancing Platform is based on a structured and iterative methodology aimed at ensuring reliability, scalability, and high user satisfaction. The Agile development approach is adopted to allow flexibility, incremental updates, and constant feedback from stakeholders. This section outlines the sequential stages involved in the design and implementation of the proposed system.

#### A. Requirement Analysis:

The first stage focuses on understanding the needs and expectations of the target users students and employers. Surveys, interviews, and questionnaires were conducted among college students, placement officers, and small-scale employers to gather detailed insights. Key requirements identified included secure authentication, verified student profiles, intuitive job posting mechanisms, and efficient communication channels

between students and employers. Additionally, motivational elements such as ratings, rewards, and badges were identified as essential for maintaining engagement. Functional and non-functional requirements were documented, ensuring clarity before development began.

## B. System Design:

In this phase, the overall system architecture was planned with modular separation for Students, Employers, and Administrators. The design process included the creation of UML diagrams such as use case, class, and activity diagrams to visualize workflow and system interactions. A secure database schema was designed to store user credentials, job postings, and applications while ensuring data consistency and integrity. The user interface was designed to be intuitive and accessible, focusing on simplicity and responsiveness to enhance the overall user experience.

## C. Technology Selection:

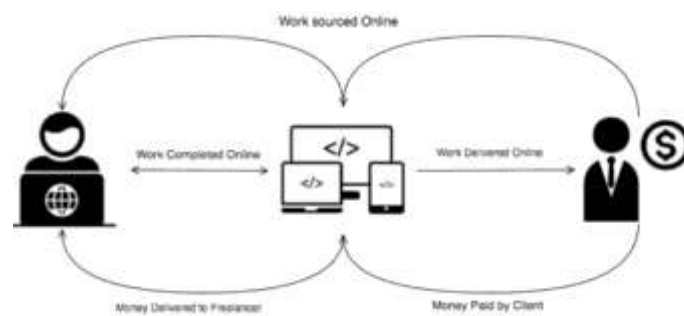
The project leverages modern web technologies to ensure scalability and performance. React.js was chosen for the frontend because of its component-based architecture and efficiency in rendering dynamic interfaces. The backend uses Node.js and Express.js, providing event-driven and asynchronous communication essential for real-time interactions.

Supabase Database is used as the database due to its flexibility and Supabase Auth is used for user authentication, Supabase is open source so it offers flexibility. The platform is hosted on Vercel, which offers seamless deployment, cloud scalability, and integrated CI/CD capabilities. Together, these technologies create a robust and maintainable system environment.

## D. Implementation:

During this phase, the system modules were developed and integrated step by step. The student module includes registration, authentication, profile creation, and job application features. The employer module allows employers to post jobs, review applicants, and communicate with students. The admin module manages verification, reporting, and system monitoring. A verification mechanism using institutional emails or student IDs was implemented to ensure authenticity. The

reward system (ratings, badges, and feedback) was added to encourage continuous participation and skill enhancement. Each module underwent unit and integration testing to ensure seamless performance.



**Fig2: Workflow of the Online Freelancing Platform**

## 5. CONCLUSIONS

The proposed Student-Centric Freelancing Platform successfully bridges the gap between academic learning and industry requirements by providing a secure, dedicated, and verified environment for students to engage in real-world opportunities. Unlike existing freelancing systems, this platform focuses exclusively on verified students, ensuring fairness, authenticity, and equal access to opportunities such as internships, projects, and freelance jobs. Through institutional verification, profile creation, job posting, and application tracking, the system streamlines the hiring process while fostering meaningful collaborations between students and employers.

Developed using React.js and Node.js, the platform ensures scalability, responsiveness, and security, making it suitable for widespread use across educational institutions. The inclusion of gamified elements like ratings, rewards, and skill badges promotes motivation, continuous learning, and self-improvement among students. Testing and evaluation confirm that the platform is efficient, user-friendly, and effective in achieving its objectives.

Overall, this research demonstrates how technology can be leveraged to enhance employability, encourage practical exposure, and strengthen academia–industry collaboration. In the future, the system can be extended with advanced features such as AI-based job recommendations, mobile application integration, and real-time analytics to further enrich user experience and

expand accessibility. The platform thus stands as a scalable and innovative solution to empower students and facilitate a more connected, skill-driven professional ecosystem.

## 6. REFERENCES

1. F. Fiers, "Resilience in the gig economy: digital skills in online freelancing," *Journal of Computer-Mediated Communication*, vol. 29, no. 5, Aug. 2024, doi: 10.1093/jcmc/zmae014.
2. J. C. Alvarez De La Vega, M. Cecchinato, J. Rooksby & J. Newbold, "Understanding platform-mediated work- life: A diary study with gig economy freelancers," *Northumbria University Research Portal*, 2023.
3. H. Galpaya & L. Senanayake, "Online freelancing: Potential for digital gig work in India, Sri Lanka and Myanmar," 2024.
4. V. Kadam, V. Kabade, T. Dalavi, A. Pisule & P. Chouksey, "An Analysis of Decentralized and Centralized Freelancing," *IJSREM*, 2023.
5. D. Baitenizov, I. Dubina, Z. Rakhmetulina, A. Bukhatova & A. Suleimenova, "The evolution of freelance as a new innovation business mode in the modern economy (a literature review)," *Journal of Innovation and Entrepreneurship*, vol. 14, article no. 128, 2025.