

**A
Project Report
On
"JobConnect"**

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Faculty of Technology & Engineering (FTE), CHARUSAT

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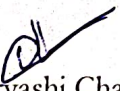


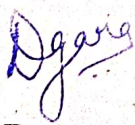
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CERTIFICATE

This is to certify that the report entitled “JobConnect” is a bonafied work carried out by **Manav Patel (22DCE079), Neelkumar Patel (22DCE080), Shivkumar Patel (22DCE082), Vandan Soni (22DCE119)** under the guidance and supervision of **Assistant Prof. Urvashi Chaudhari** for the subject **CE367-Project-IV (CE)** of 6th Semester of Bachelor of Technology in Devang Patel Institute of Advance Technology & Research (DEPSTAR) at Faculty of Technology & Engineering – CHARUSAT, Gujarat.

To the best of my knowledge and belief, this work embodies the work of candidate himself, has duly been completed, and fulfills the requirement of the ordinance relating to the B.Tech. Degree of the University and is up to the standard in respect of content, presentation and language for being referred to the examiner.


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DECLARATION BY THE CANDIDATE

We hereby declare that the project report entitled “**JobConnect**” submitted by us to Devang Patel Institute of Advance Technology & Research, Changa for Partial Fulfilment of the Requirements for the 6th Semester Project-III(CE367) in Faculty of Technology and Engineering, DEPSTAR-CHARUSAT under the guidance of Assistant Prof. Urvashi Chaudhari. I further declare that the work carried out and documented in this project report has not been submitted anywhere else either in part or in full and it is the original work, for the award of any other degree or diploma in this institute or any other institute or university.

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ABSTRACT

The JobConnect website project creates an intelligent user-friendly platform aimed at uniting job seekers with recruiters through its development. The platform uses AI analysis to inspect resumes and performs smart job matching that supplies personalized recommendation matches based on candidate abilities and professional history. The system combines features which enable real-time job searching and internship search alongside skill evaluation tests with strong prevention against cheating alongside a user-friendly candidate management dashboard. JobConnect delivers a convenient platform experience for its broad group of users through an interface that presents easy access no matter what device is used. The system implements advanced security measures and encryption solutions to protect data privacy and ensure reliable operations for users including new holders of qualifications and established recruitment officials.

ACKNOWLEDGEMENT

We, the developer of web application “JobConnect” with immense pleasure and commitment would like to present the project assignment. The development of this has project give us wide opportunity to think, implement and interact with various aspects of management skills as well as the new emerging technologies.

Every work that one completes successfully stands on the constant encouragement, good will and support of the friends, colleagues and people around. We hereby avail this opportunity to express our gratitude to number of people who extended their valuable time, full support and cooperation in developing the project.

I express deep sense of gratitude towards our Head of the CE Department, Dr. Dweepna Garg and project guides Assistant Prof. Urvashi Chaudhari for the support during the whole session of study and development and without which this project would not have been completed. It is because of them, that we were prompted to do hard work, adopting new technologies.

Thanks,

Manav Patel

Neelkumar Patel

Shivkumar Patel

Vandan Soni

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CHAPTER 1: INTRODUCTION

1.1 PROJECT DEFINITION

- The **JobConnect** project is a web-based application designed to bridge the gap between job seekers and recruiters by streamlining the recruitment process. The platform leverages AI-driven resume analysis, smart job matching, and skill-based testing to offer personalized job recommendations and career insights. It provides real-time job search capabilities, an intuitive recruiter dashboard, and integrated mentorship features, catering to a diverse range of users from fresh graduates to experienced professionals. With a focus on security, usability, and data privacy, JobConnect simplifies the job search and recruitment experience while ensuring a robust and scalable system.

1.2 OBJECTIVE

- The primary objective of the JobConnect project is to develop a secure, intuitive, and feature-rich platform that enhances the employment landscape for both job seekers and recruiters. Key objectives include:
 1. **AI-Powered Resume Analysis:** Evaluate resumes to identify strengths, weaknesses, and provide tailored improvement suggestions.
 2. **Smart Job Matching:** Deliver personalized job and internship recommendations based on user skills, experiences, and preferences.
 3. **Real-Time Job Search:** Enable users to search, filter, and apply for opportunities with up-to-date listings and application tracking.
 4. **Recruiter Tools:** Provide an efficient dashboard for recruiters to post job openings, review applications, and manage candidate selections.
 5. **Skill-Based Assessments:** Offer targeted tests to validate user expertise and enhance matching accuracy.
 6. **User-Friendly Experience:** Design an intuitive and responsive interface that ensures seamless navigation across all devices.
 7. **Security and Reliability:** Ensure high levels of data protection and system availability through robust security measures and scalable architecture.

1.3 TOOLS & TECHNOLOGIES

1 Editor: Visual Studio

Visual Studio Code is chosen for its versatility, integrated debugging, and robust support for both frontend and backend development.

2 Frontend Technology: React JS

React.js is employed to build dynamic, responsive, and user-friendly interfaces, making the platform accessible and engaging for all users.

3 Backend Technology: Node.js with Express.js and MongoDB

Node.js with Express.js is utilized for efficient API handling and server-side operations, while MongoDB manages user profiles, job listings, and application data effectively.

4 AI/ML Integration: Python-based NLP

Python, combined with NLP techniques, is used to develop the AI-powered resume analyzer, which extracts key information from resumes and aids in personalized job matching.

CHAPTER 2: DESCRIPTION

2.1 Project Description

- The JobConnect project is a web application that creates a dynamic and secure space for connecting job seekers with recruiters. It is designed to meet the needs of a diverse range of users, from fresh graduates to experienced professionals, by providing tailored career resources and job opportunities.

Key Features:

1. **AI-Powered Resume Analysis:** Users can upload their resumes to receive an automated evaluation that highlights strengths, suggests improvements, and provides personalized job recommendations.
2. **Smart Job Matching:** Advanced algorithms match job seekers with relevant opportunities based on their skills, experience, and career preferences.
3. **User-Friendly Interface:** The platform boasts an intuitive, responsive design optimized for all devices, ensuring a seamless navigation experience.
4. **Real-Time Job Search:** Users can explore up-to-date job listings, filter opportunities based on various criteria, and track their application statuses in real time.
5. **Recruiter Dashboard:** Recruiters are equipped with tools to post job openings, manage applications, and streamline candidate selection processes.
6. **Skill-Based Assessments:** The platform offers targeted assessments to validate user expertise, enhancing the precision of job matching and career development insights.
7. **Security Measures:** Robust security protocols, including data encryption and secure authentication, ensure that user data remains protected and confidential.

CHAPTER 3: SOFTWARE & HARDWARE REQUIREMENTS

3.1 SOFTWARE REQUIREMENTS

- **Operating System:** Windows 10 or later, macOS, or Linux
- **Code Editor:** Visual Studio Code
- **Frontend Technologies:** React.js
- **Backend Technologies:** Node.js with Express.js
- **Database:** MongoDB
- **AI/ML Framework:** Python-based NLP libraries
- **Browser:** Google Chrome, Firefox, Edge, or Brave

3.2 HARDWARE REQUIREMENTS.

- Processor: Intel Core i5 8th Gen
- RAM: 8GB
- Hard Disk: 1TB

CHAPTER 4: MAJOR FUNCTIONALITY

4.1 DATABASE

- The JobConnect platform uses a NoSQL database (MongoDB) to store user-related data, including job seeker profiles, recruiter information, resume data, and application histories.
- MongoDB is chosen for its flexibility in managing semi-structured data and its ability to scale efficiently as the volume of job listings and user profiles increases.
- Users must sign up or sign in to create an account and securely access the platform's features.
- Upon logging in, users can update their profiles, upload resumes, and save job preferences, with all details stored for easy retrieval and future reference.
- When users log out, they can securely return later to view their previous activity, job applications, and personalized recommendations.

4.2 HOW TO USE THE APP?

1. Open the Application:

Launch the web application in a modern web browser (preferably Google Chrome).

2. Sign In/Sign Up:

- For new users, click the Sign Up button to create an account by entering the required details.
- Existing users can click the Sign In button and log in with their credentials.

3. Complete Your Profile:

After logging in, navigate to your profile section to upload your resume, update your skills, and set job preferences.

4. Search for Jobs:

- Use the job search functionality to browse available job and internship listings.
- Apply filters such as location, job category, or experience level to refine your search.

5. Apply for Jobs:

Select a job listing to view detailed information and click the Apply button to submit your application.

6. Access Additional Features:

- For recruiters, access the dedicated dashboard to post job openings and manage candidate applications.
- Job seekers can also take skill-based assessments and seek mentorship opportunities as needed.

7. Sign Out:

When finished, ensure to log out by clicking the Sign Out button to secure your account.

8. Return to Previous Sessions:

To continue your job search or review past applications, simply log in again using your credentials.

CHAPTER 5: SYSTEM DIAGRAMS

5.1 ACTIVITY DIAGRAM

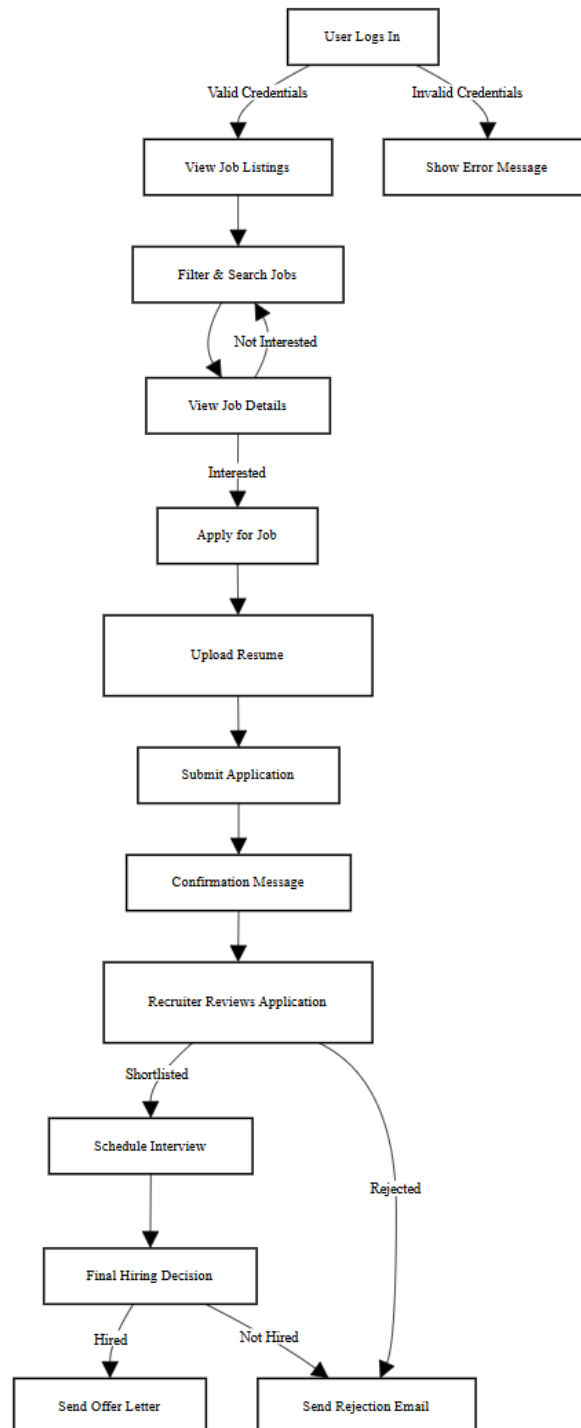


Fig 5.1: Activity Diagram

5.2 CLASS DIAGRAM

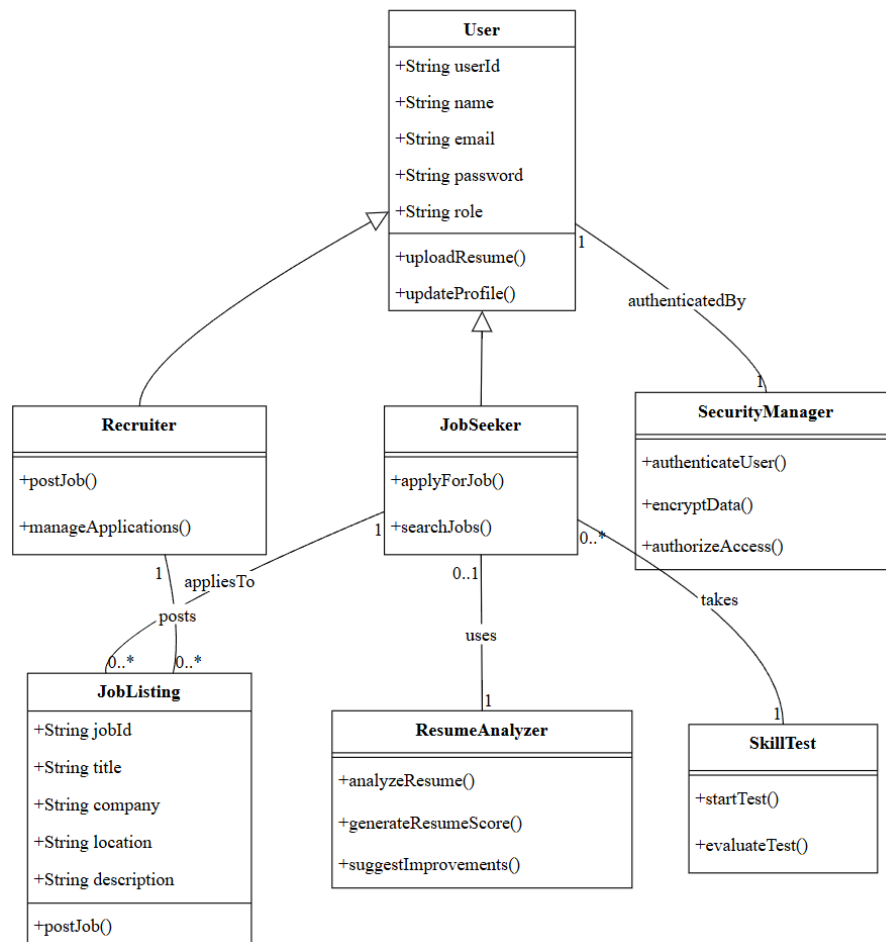


Fig 5.2: Class Diagram

5.3 COLLABORATION DIAGRAM

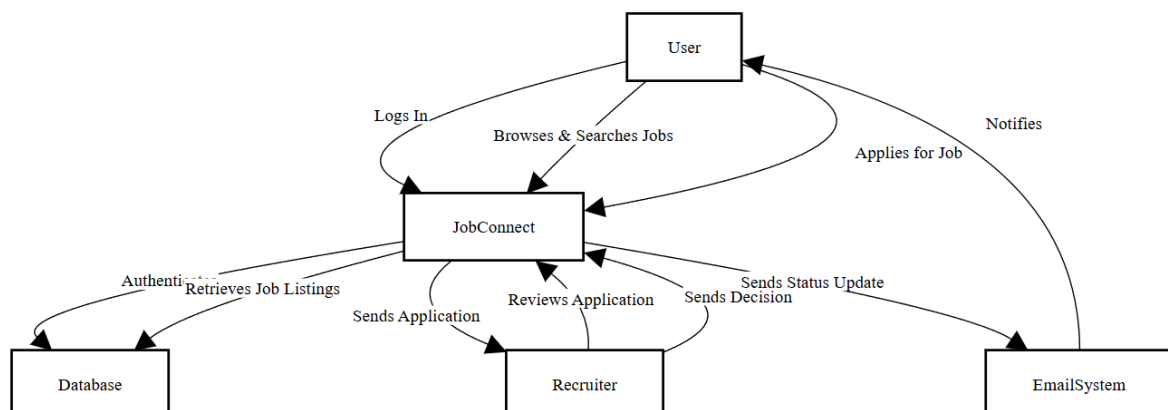


Fig 5.3: Collaboration Diagram

5.4 SEQUENCE DIAGRAM

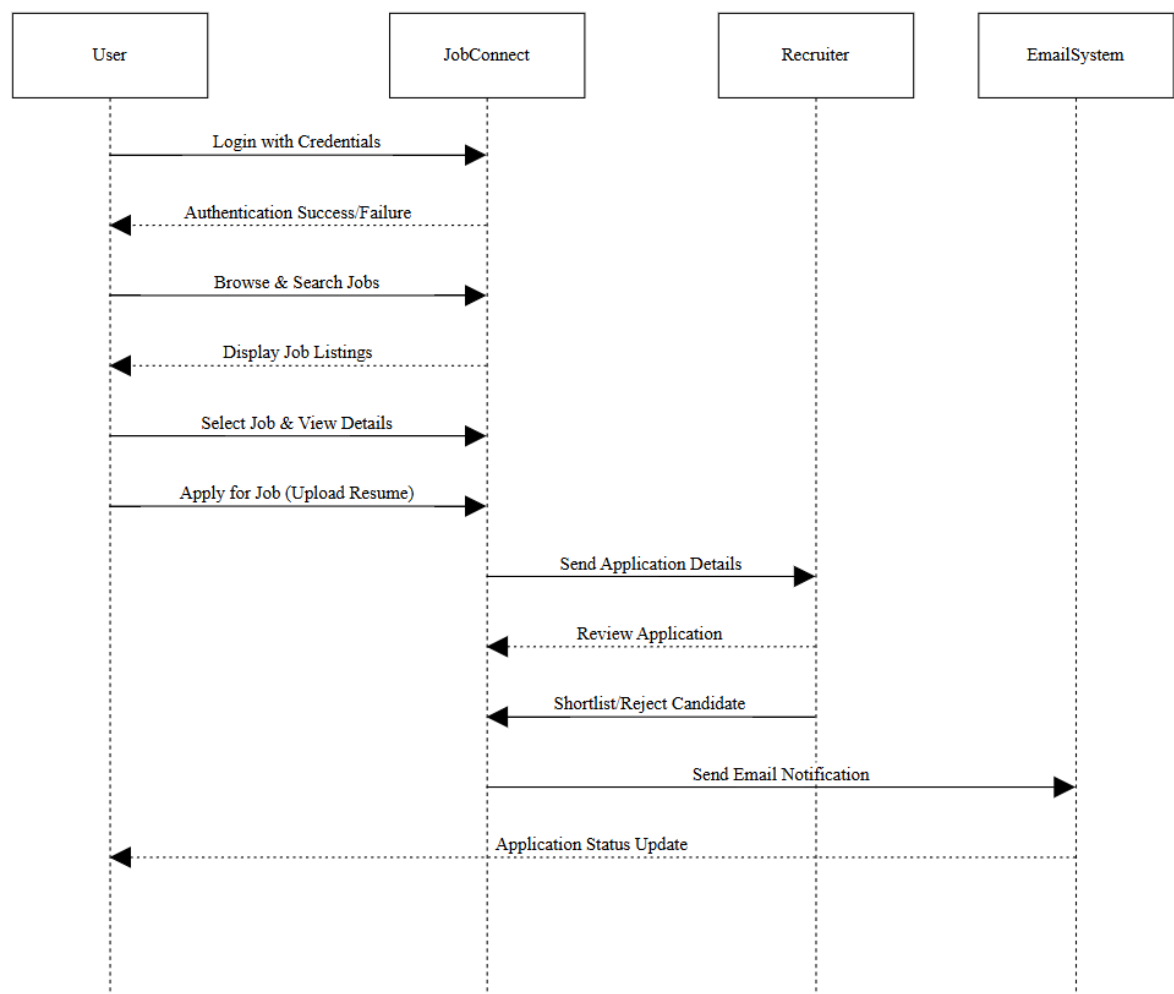


Fig 5.4: Sequence Diagram

CHAPTER 6: SCREENSHOTS

6.1 SCREENSHOTS

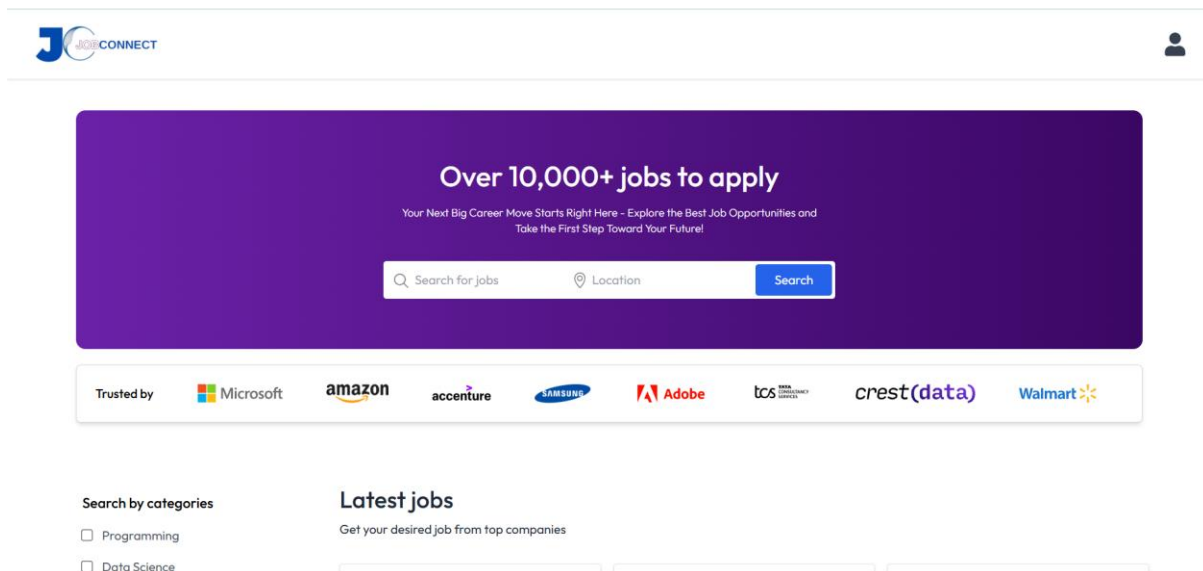


Fig 6.1: Home Page

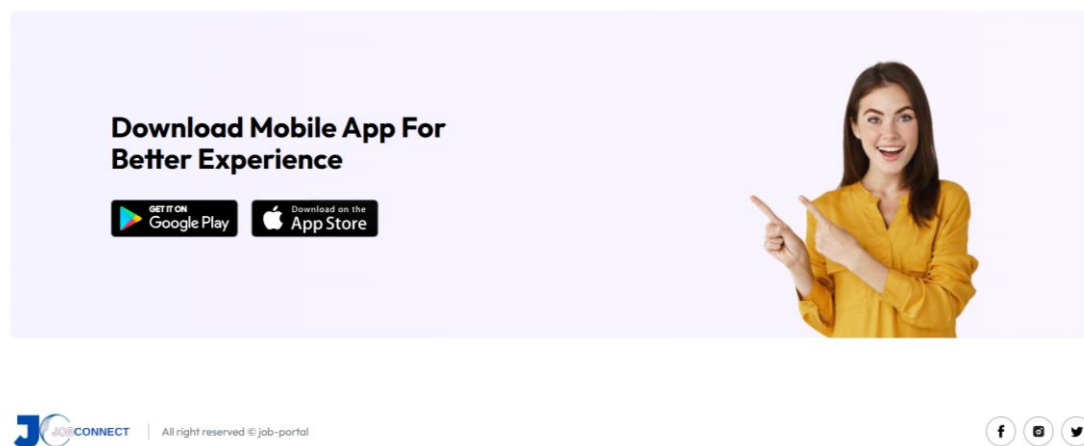


Fig 6.2: Footer

Search by categories


- ☐ Programming
- ☐ Data Science
- ☐ Designing
- ☐ Networking
- ☐ Management
- ☐ Marketing
- ☐ Cybersecurity

Search by Location

- ☐ Bangalore
- ☐ Washington
- ☐ Hyderabad
- ☐ Mumbai
- ☐ California
- ☐ Chennai
- ☐ New York

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Cloud Engineer

Hyderabad Intermediate Level

Join our technology team as a Cloud Engineer, where you will be responsible for designing and managing our cloud infrastructure. You will

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Network Security Engineer

Bangalore Senior Level

We are seeking a Network Security Engineer to protect our organization's IT infrastructure. You will design and implement security measure.

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Software Tester

Chennai Intermediate Level

As a Software Tester, you will play a critical role in ensuring the quality and reliability of our software applications. You will design

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Graphic Designer

Chennai Intermediate Level

Join our creative team as a Graphic Designer, where you will be responsible for creating visually appealing graphics and layouts that enha

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Content Marketing Manager

Mumbai Senior Level

We are looking for a Content Marketing Manager to lead our content strategy and execution. In this role, you will develop compelling conte

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Human Resources Specialist

Washington Intermediate Level

As a Human Resources Specialist, you will support various HR functions, including recruitment, employee relations, and compliance. You will

[Apply now](#) [Learn more](#)

Fig 6.3: Job Listing



Cloud Engineer

Slack Hyderabad Intermediate Level CTC: 102k

[Apply now](#)

Posted 5 months ago


Job description

Join our technology team as a Cloud Engineer, where you will be responsible for designing and managing our cloud infrastructure. You will collaborate with development and operations teams to ensure the efficient deployment and scaling of applications.

Key Responsibilities

1. Design and implement cloud solutions using AWS, Azure, or Google Cloud Platform.
2. Monitor and optimize cloud resources for performance and cost efficiency.
3. Work with DevOps teams to automate deployment processes.
4. Ensure cloud security and compliance with industry standards.
5. Provide technical support and troubleshooting for cloud-based applications.

More jobs from Slack



Full Stack Developer

California Senior Level

We are seeking a highly skilled Full Stack Developer to join our dynamic and innovative team. The ideal candidate will have a passion for

[Apply now](#) [Learn more](#)

Fig 6.4: Job Description

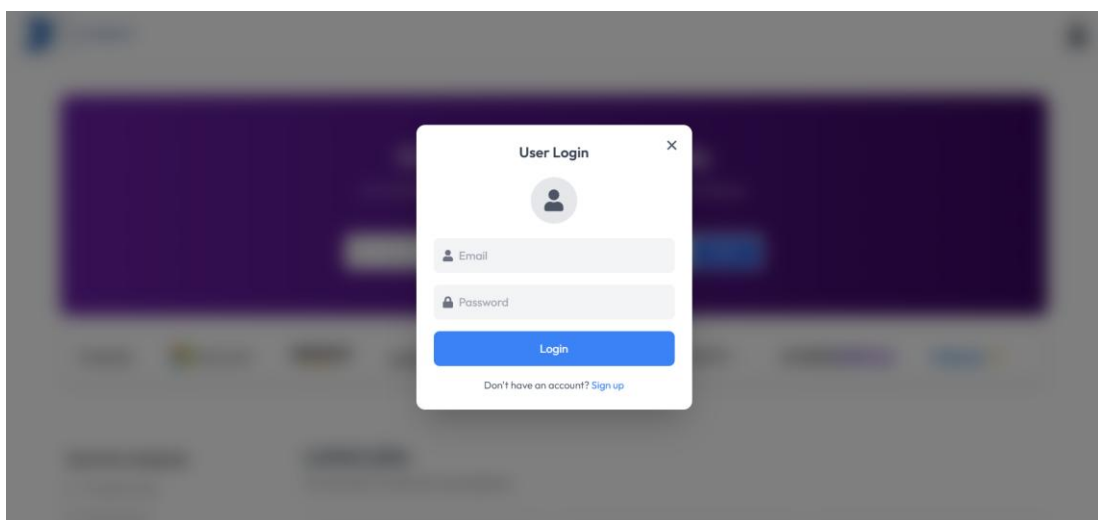
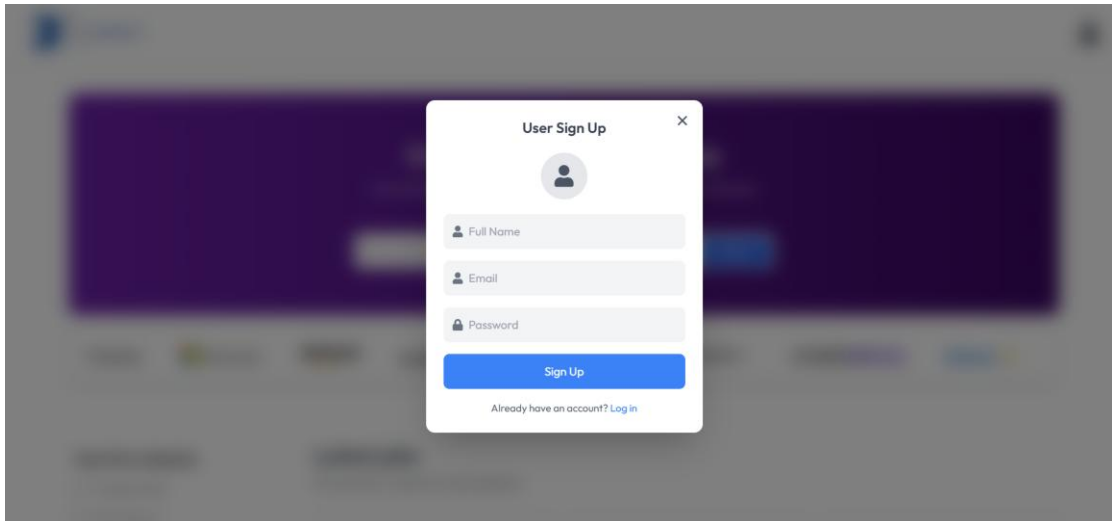
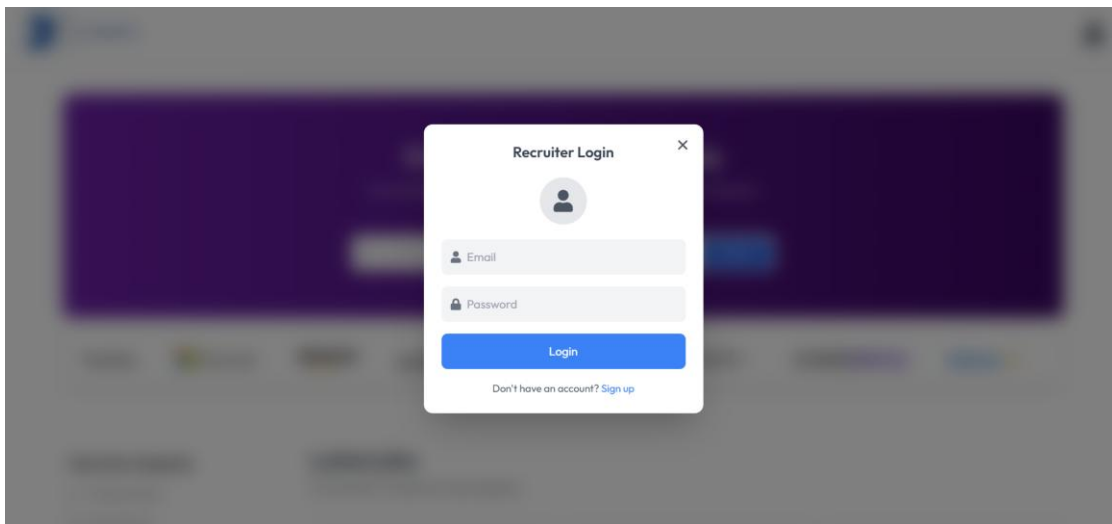
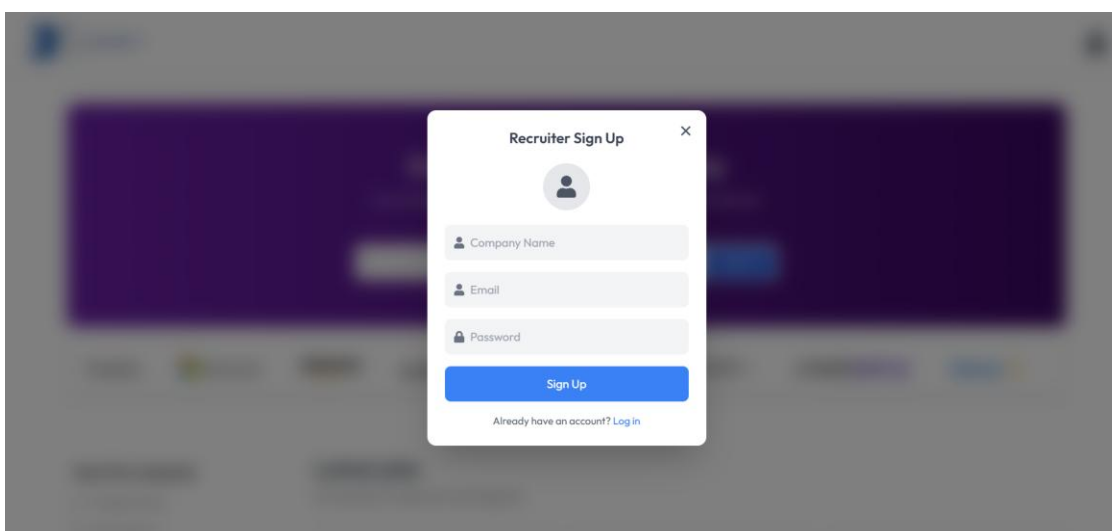
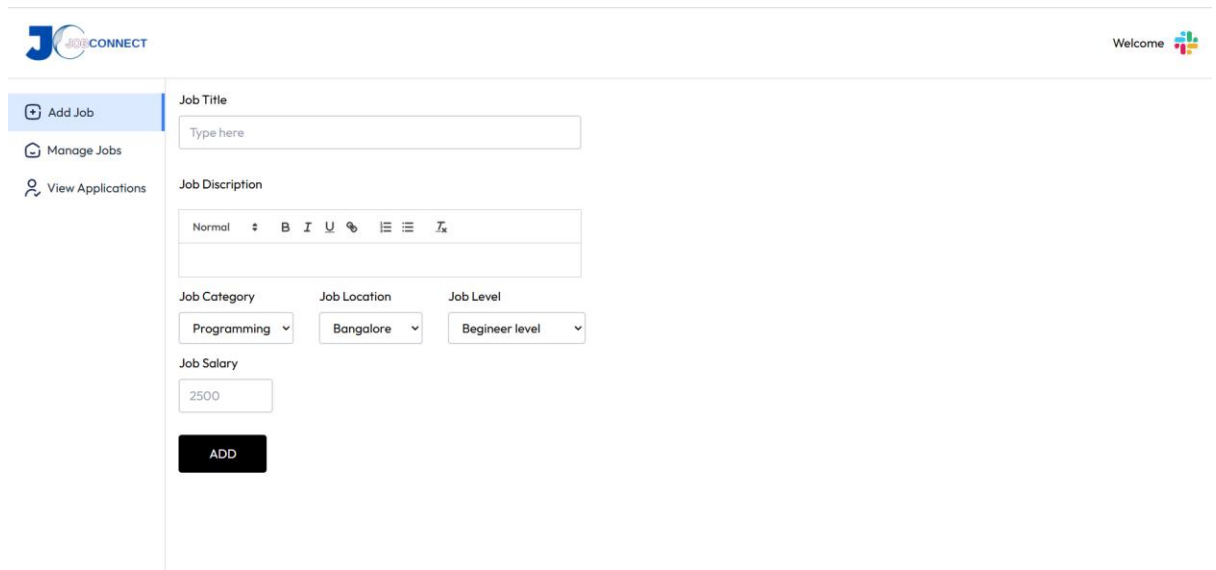


Fig 6.5: User Login

**Fig 6.6: User Signup****Fig 6.7: Recruiter Login****Fig 6.8: Recruiter Signup**



JOJOCONNECT Welcome

Add Job

Manage Jobs

View Applications

Job Title

Type here

Job Discription

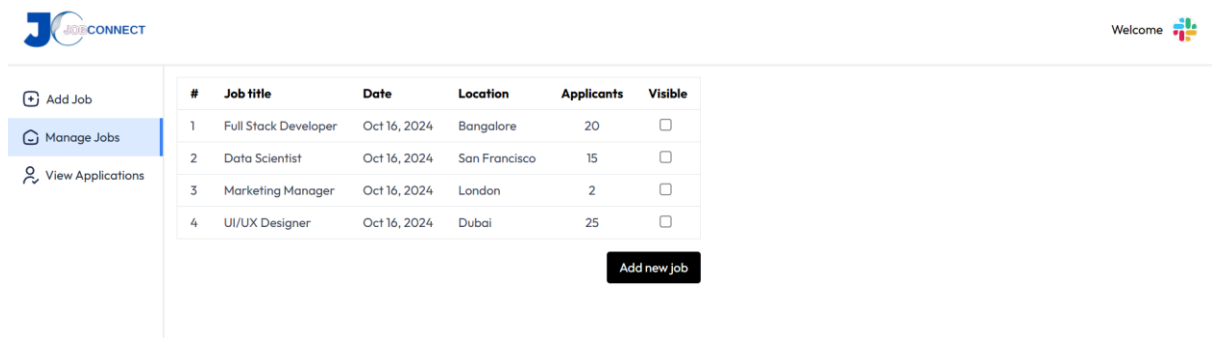
Normal B I U

Job Category Programming **Job Location** Bangalore **Job Level** Beginner level

Job Salary 2500

ADD

Fig 6.9: Add Jobs



JOJOCONNECT Welcome

Add Job

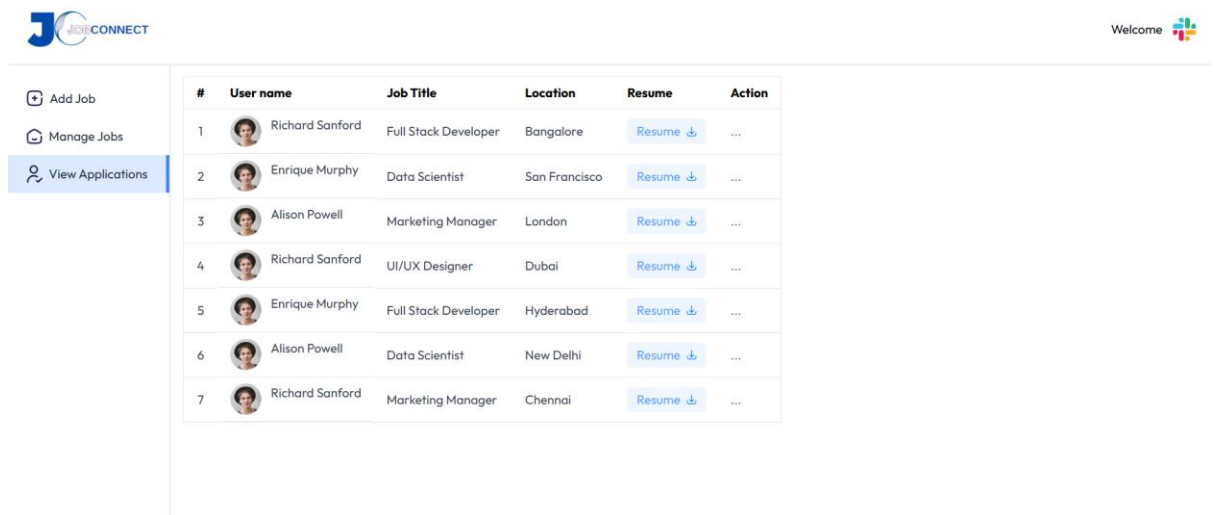
Manage Jobs

View Applications

#	Job title	Date	Location	Applicants	Visible
1	Full Stack Developer	Oct 16, 2024	Bangalore	20	<input type="checkbox"/>
2	Data Scientist	Oct 16, 2024	San Francisco	15	<input type="checkbox"/>
3	Marketing Manager	Oct 16, 2024	London	2	<input type="checkbox"/>
4	UI/UX Designer	Oct 16, 2024	Dubai	25	<input type="checkbox"/>

Add new job

Fig 6.10: Manage Jobs



JOJOCONNECT Welcome

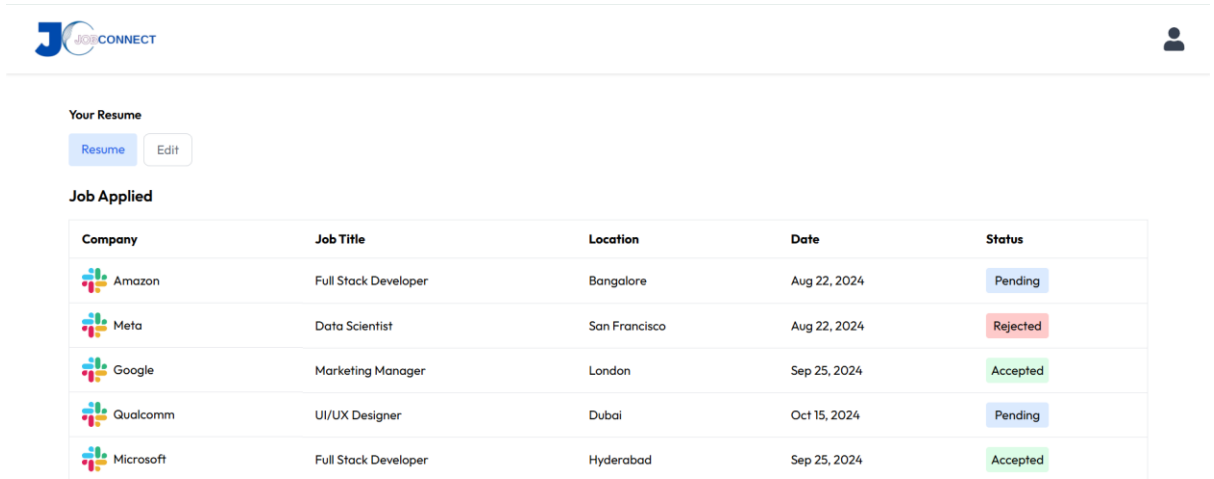
Add Job

Manage Jobs

View Applications

#	User name	Job Title	Location	Resume	Action
1	Richard Sanford	Full Stack Developer	Bangalore	Resume	...
2	Enrique Murphy	Data Scientist	San Francisco	Resume	...
3	Alison Powell	Marketing Manager	London	Resume	...
4	Richard Sanford	UI/UX Designer	Dubai	Resume	...
5	Enrique Murphy	Full Stack Developer	Hyderabad	Resume	...
6	Alison Powell	Data Scientist	New Delhi	Resume	...
7	Richard Sanford	Marketing Manager	Chennai	Resume	...

Fig 6.11: Job Applications



The screenshot shows a web interface for 'JOE CONNECT'. At the top left is the logo, and at the top right is a user profile icon. Below the logo, there is a section titled 'Your Resume' with two buttons: 'Resume' and 'Edit'. Below this is a section titled 'Job Applied' which contains a table of job applications.






Company	Job Title	Location	Date	Status
 Amazon	Full Stack Developer	Bangalore	Aug 22, 2024	Pending
 Meta	Data Scientist	San Francisco	Aug 22, 2024	Rejected
 Google	Marketing Manager	London	Sep 25, 2024	Accepted
 Qualcomm	UI/UX Designer	Dubai	Oct 15, 2024	Pending
 Microsoft	Full Stack Developer	Hyderabad	Sep 25, 2024	Accepted

Fig 6.12: User Applied Job Applications

CHAPTER 7: CONCLUSION & FUTURE ENHANCEMENTS

7.1 Conclusion

1. User-Friendly Interface:

- The development process resulted in an intuitive and easy-to-navigate interface, significantly enhancing the overall user experience. Feedback from early users indicated that the platform is accessible for beginners while still offering robust functionalities for experienced professionals.

2. Real-Time Job Search and Notifications:

- JobConnect successfully integrates real-time job listings and alerts, ensuring users receive the latest opportunities as they become available. This feature enhances user engagement and helps job seekers act quickly on new openings.

3. AI-Powered Resume Analysis and Matching:

- The incorporation of an AI-driven resume analyzer and job matching system has been a key milestone. Users benefit from personalized job recommendations and detailed feedback on their resumes, enabling more informed career decisions.

4. Efficient Application Tracking and Management:

- Users can easily track their job applications, monitor status updates, and manage their job search process within a unified dashboard, which promotes a more organized and effective job hunting experience.

5. Enhanced Security Measures:

- The implementation of robust security features—including secure authentication and data encryption—ensures that user data is protected, fostering trust and reliability across the platform.

6. Foundation for Future Development:

- The project has laid a solid groundwork for future enhancements, such as integrating additional job boards, incorporating advanced career analytics, and further refining the AI matching algorithm, ensuring JobConnect continues to evolve with user needs.

7.2 Future Enhancements

1. Job Market Coverage & Board Integration

- **Current Limitation:** JobConnect currently aggregates job listings from a limited number of sources. This narrow coverage restricts access to a broad range of opportunities, potentially hindering job seekers interested in diverse industries or international positions.
- **Future Enhancement:** By integrating additional job boards and career portals, the platform will significantly broaden the range of available listings. This expansion will allow users to access more diverse job opportunities across various industries and regions.

2. Career Analytics and Dashboard Customization

- **Current Limitation:** The platform lacks comprehensive career analytics and advanced customization options. Users do not receive detailed insights into application success rates or personalized career path recommendations, and the limited dashboard customization can affect the monitoring of job search progress.
- **Future Enhancement:** The introduction of advanced career analytics tools—such as application success metrics, skill gap analysis, and personalized career trajectory forecasts—will empower users to optimize their job search strategies. Additionally, customizable dashboards and profile views will offer a more tailored user experience.

3. AI Matching Algorithm Enhancement

- **Current Limitation:** While JobConnect features an AI-powered resume analyzer and job matching system, its current algorithm needs refinement. The existing model may not always accurately match job seekers' profiles with relevant opportunities.
- **Future Enhancement:** Refining the AI matching algorithm by incorporating additional data points and more sophisticated algorithms will enhance its accuracy and relevance. This improvement will ensure that job recommendations are more precise, ultimately supporting better-informed career decisions.

4. User Education and Career Development Resources

- **Current Limitation:** There is currently a lack of robust educational resources, leaving especially new job seekers without the guidance needed to understand job search strategies and prepare effectively for interviews.

- **Future Enhancement:** Introducing educational content such as career development tutorials, webinars, and industry articles will provide users with valuable insights. This initiative will help job seekers, particularly those new to the market, to make more informed career decisions and improve their chances of success.

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