

INDUSTRY INTERNSHIP

Report on
21INT82 – Industry Internship

Submitted by
VAISHNAVI RAO.B
USN: 4MW21CS113

In partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING



Department of Computer Science & Engineering

**SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT**

Vishwothama Nagar, Bantakal – 574 115, Udupi District, Karnataka

2024–2025

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust ®, Udupi)
Vishwothama Nagar, BANTAKAL – 574 115, Udupi District, Karnataka, INDIA

Department of Computer Science & Engineering



CERTIFICATE

Certified that the Internship Work titled '**Industry Internship**' is carried out by:

Ms. VAISHNAVI RAO.B

USN: 4MW12CS113

a bonafide students of Shri Madhwa Vadiraja Institute of Technology and Management, in partial fulfilment for the award of the degree of **Bachelor of Engineering** in Computer Science Engineering of Visvesvaraya Technological University, Belagavi during the year 2024-25. It is certified that all the corrections / suggestions have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of Internship Work prescribed for the said degree.

Ms. Preethi M

Asst. Professor & Guide
Dept. of CSE

Dr. Sowmya J Bhat

Asso. Professor and HOD
Dept. of CSE

Dr. Thirumaleshwara Bhat

Principal
SMVITM, Bantakal

Internship Evaluation

CIE: Internal Assessment	Name of the Examiners:	Signature with Date
	1. 2.	
SEE: Semester End Exam	Name of the Examiners:	Signature with Date
	1. 2.	

LETTER OF INTERNSHIP COMPLETION

Date: 21st April 2025

Reference no: QL-1098

Dear VAISHNAVI RAO B,

This is to certify that the project entitled Job Portal was started from 6th November 2024 and was completed on 16th April 2025. You have successfully completed the internship tenure.

During the Span of training, we found you as punctual and hardworking. Also, your learning and observation powers are good.

We appreciate you for utilizing your skill at fullest and delivering on time and we wish you all the best.

Kind regards,



For Quantum Learning's
Mrs. supriya vijayakumar,
Operations Manager,
Quantum Learnings, New Delhi

Address 1: #7th floor, Nehru Place, New Delhi, Delhi 110024

Address 2: 2nd Floor, Express New City Complex, 13/36, NR Road, Kumbharagundi,
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MSME no: DL09D0002334

ACKNOWLEDGEMENT

I express my deepest gratitude and respect to my internship trainer **Mr. Parth Sarathee and Deepak Kumar Sharma, Technical subject matter expert**, from **Quantum Learning, Bengaluru**, for their valuable guidance and encouragement while doing this internship work.

I am indebted to **Ms. Preethi M**, Asst. Professor, Department of Computer Science and Engineering for her advice and suggestions at various stages of the work. I also extend my heartfelt gratitude to **Dr. Sowmya J Bhat**, Head of the Department.

I take this opportunity to offer my regards to all of those who have supported us directly or indirectly in the successful completion of this internship work.

VAISHNAVI RAO.B
USN: 4MW21CS113

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INTRODUCTION

During my internship at Quantum Learnings, I had the opportunity to work on web development projects while exploring how AI tools like ChatGPT can be effectively integrated into websites. Along the way, we also learned about other essential technologies such as version control systems, Bootstrap for responsive design, and RESTful APIs for client-server communication. We were introduced to the MERN stack (MongoDB, Express.js, React, and Node.js), through which I gained hands-on experience in building full-stack web applications from the ground up.

Quantum Learnings is an e-learning and training solutions company based in India that specializes in delivering project-based learning experiences in cutting-edge technologies. They provide a wide range of professional courses and internships in domains such as Artificial Intelligence, Machine Learning, Web Development, Cybersecurity, and Data Science. As a recognized Microsoft Global Training Partner, Quantum Learnings focuses on empowering students and professionals with practical skills, helping them build career-ready portfolios. Their training model emphasizes mentorship, hands-on projects, and real-time application of tools and frameworks used in the tech industry today.

METHODS & MATERIALS

The internship began with a focus on the core concepts of web development. We started with the basics—HTML, CSS, and JavaScript to understand how web pages are structured and styled. A practical assignment included using modern CSS techniques like Flexbox and Grid. We moved on to backend development using Node.js and Express.js after being familiar with frontend. These technologies helped us understand how web servers work and how they handle client requests and server responses. We built simple RESTful APIs and connected them with MongoDB—a NoSQL database for storing and managing user data efficiently.

In the final phase, we explored React.js, which enabled us to build dynamic and interactive user interfaces using components and state management.

Once the core concepts were covered, I was grouped into small teams and asked to work on a project using all the technologies we had learned. My team decided to build a **Job Portal** project.

2.1 About the Project – JOB PORTAL

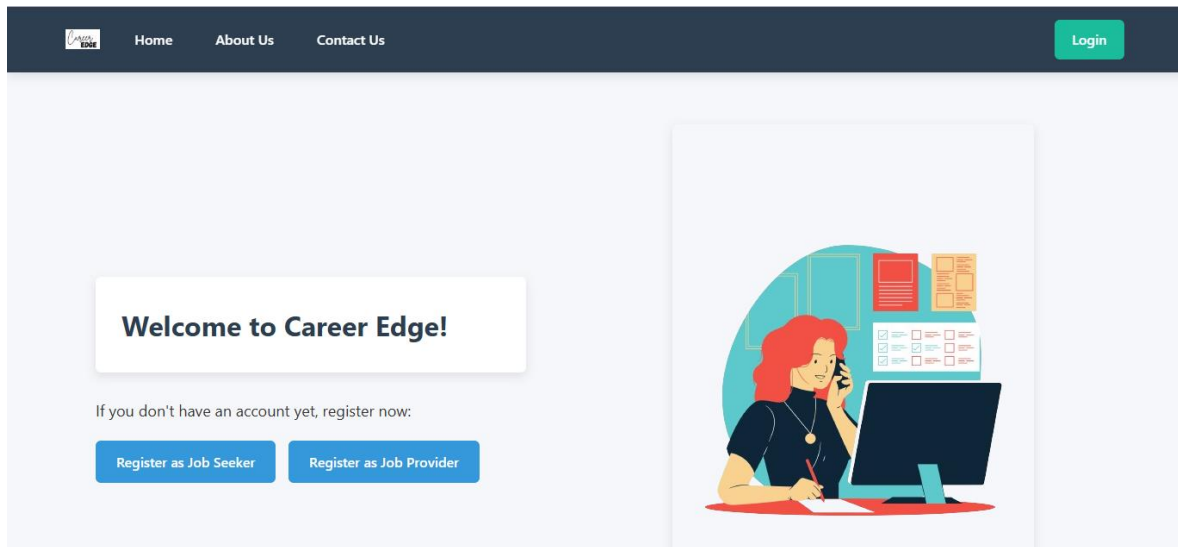


Figure 2.1.1: Landing page of Job Portal

Job Portal is a comprehensive web-based employment platform built using Django that connects job seekers with potential employers. The system leverages Python, Django framework for backend operations, and modern frontend technologies including HTML, CSS, and JavaScript to create an intuitive user experience.

Users can register as either job seekers or job providers, each with dedicated dashboards and functionalities. Job seekers can create detailed profiles including their skills, experience, qualifications, and location preferences. They can search for jobs using multiple filters such as job title, company, location, salary range, job type, and experience level. The system includes an intelligent job recommendation engine that matches job seekers with appropriate opportunities based on their skills, location preferences, and experience level.

Job providers can create company profiles, post job listings with detailed descriptions, requirements, and application deadlines. They can manage applications, review candidate profiles, and update application statuses such as Pending, Under Review, Selected for Interview, and Rejected. The system notifies both job seekers and providers about new jobs and application updates.

2.2 Hardware and Software Requirements

Hardware Requirements

- **Recommended:** 8GB RAM, Quad-Core Processor, 20GB Storage

Software Requirements

- **Backend Framework:** Django (Python)
- **Frontend:** HTML, CSS, JavaScript, Bootstrap
- **Database:** SQLite (Development)
- **Version Control:** Git & GitHub
- **Development Environment:** Visual Studio Code
- **Deployment:** Render

2.3 System Components

Job Portal consists of the following key components:

- **User Authentication System:** Secure registration and login functionality with role-based access control (job seeker or provider). Includes password validation with requirements for length and special characters.
- **Profile Management:** Both job seekers and providers can create and edit comprehensive profiles. Job seekers can upload resumes and list skills, while providers can add company information and logos.
- **Job Management:** Providers can post, edit, and delete job listings with detailed information including title, description, salary, location, required skills, and application deadlines.
- **Application System:** Job seekers can apply to positions by submitting their qualifications, experience, and resume. The system prevents duplicate applications.
- **Search and Filter Functionality:** Advanced search capabilities with multiple filters to help users find relevant jobs or candidates.
- **Recommendation Engine:** Smart job matching based on skills, location, and experience level to suggest relevant opportunities to job seekers.
- **Bookmarking System:** Job seekers can save interesting positions for later review.

2.4 Database Design

The database is designed with a robust schema to store user profiles, job listings, and application data.

UserProfile Model

- Extends Django's built-in User model
- Stores role information (job seeker or provider)

JobSeeker Model

- Stores detailed job seeker information including full name, skills, experience, and location preferences
- Linked to UserProfile model

JobProvider Model

- Stores company information and profile details
- Linked to UserProfile model

Job Model

- Contains comprehensive job listing details
- Includes fields for title, description, company, location, salary, requirements, and application deadlines
- Linked to provider (User model)

JobApplication Model

- Tracks applications submitted by job seekers
- Stores applicant details, resume files, and application status
- Includes notification flags for both seekers and providers

SavedJob Model

- Tracks bookmarked jobs for each user
- Enables quick access to interesting opportunities

2.5 Functional Features

Core Features

- User Registration and Authentication: Secure registration with role selection and password validation
- Profile Management: Detailed profile creation and editing for both user types
- Job Posting and Management: Complete job lifecycle management for providers
- Application Processing: Streamlined application submission and tracking
- Search and Filter: Advanced job search with multiple parameters
- Recommendations: Smart job matching based on user profiles
- Bookmarking: Save and organize interesting job opportunities
- Real-time Notifications: Updates on new jobs and application status changes
- Data Export: Excel export functionality for application data

2.6 Methodology and Implementation

Step-by-Step Workflow

1. Project Setup and Configuration

- Initialized Django project structure
- Created necessary apps (users, jobs, applications)
- Configured settings.py with appropriate middleware and installed apps
- Set up URL routing for all application features

2. Database Design and Implementation

- Created models for User Profile, Job Seeker, Job Provider, Job, Job Application, and Saved Job
- Defined relationships between models using Django's ORM
- Implemented database migrations to create schema
- Added necessary indexes for query optimization

3. User Authentication System

- Implemented user registration with role selection (seeker/provider)
- Created login/logout functionality with session management
- Developed password validation with security requirements
- Set up user profile creation and management

4. Job Seeker Features

- Built profile creation forms with skills, experience, and location preferences
- Implemented job search with multiple filtering criteria
- Created job application submission system with resume upload
- Developed application tracking and status monitoring
- Added job recommendation engine based on skills and location

5. Job Provider Features

- Created company profile management system
- Implemented job posting functionality with detailed form
- Built application review system with status updates
- Added applicant filtering and sorting capabilities
- Developed data export functionality to Excel

6. Frontend Development

- Designed responsive templates using HTML, CSS, and Bootstrap
- Implemented interactive features with JavaScript
- Created user-friendly forms with validation
- Developed notification system for updates

7. Testing and Debugging

- Conducted unit testing for core functionality
- Performed integration testing for system components
- Verified user flows and fixed identified issues
- Optimized database queries for performance

8. Deployment Using Render

- Created a Render account and set up a new web service using the free 30-day trial
- Connected the GitHub repository for continuous deployment
- Added environment variables for sensitive information
- Utilized the default SQLite database for deployment
- Configured static file serving through Render's CDN
- Set up media file storage for user uploads
- Enabled HTTPS with automatic SSL certificate
- Performed final testing on the deployed application

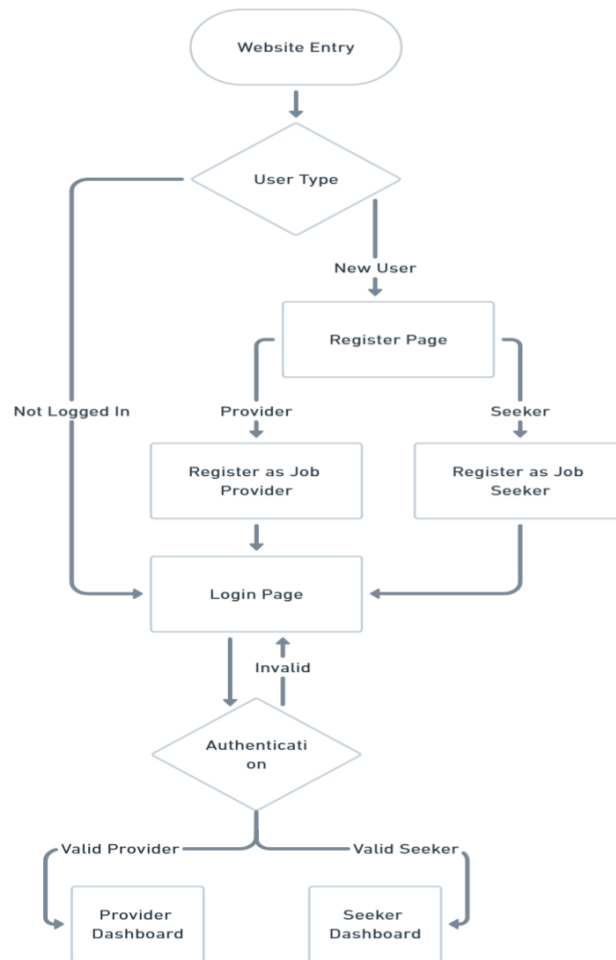


Figure 2.6.1: User Registration and Login Flow in the Job Portal



Figure 2.6.2: Seeker Dashboard Functionalities

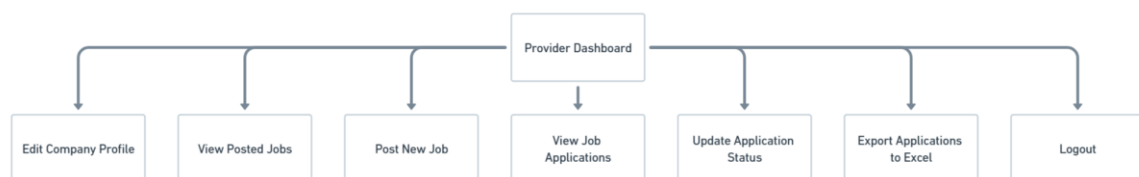


Figure 2.6.3: Provider Dashboard Functionalities

2.7 Results

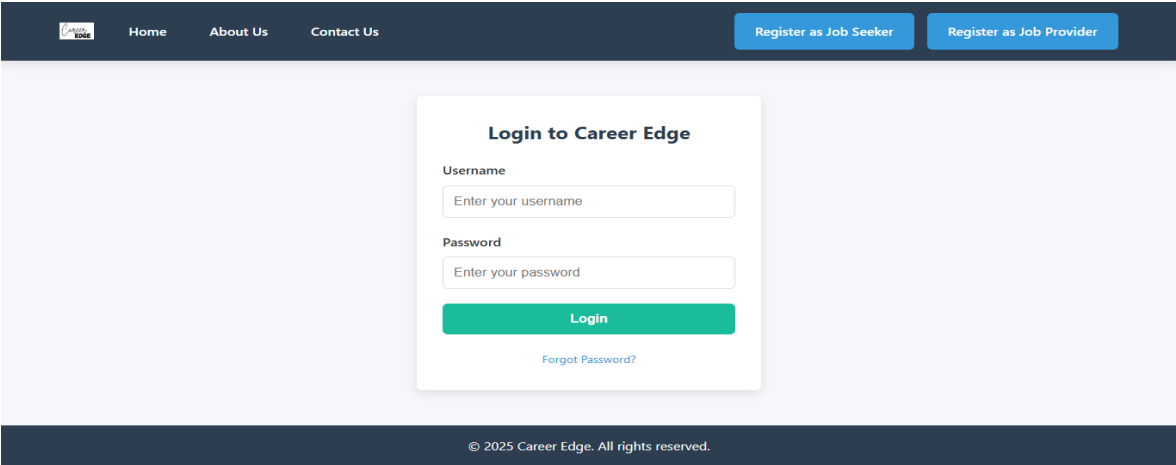


Figure 2.7.1: Login Page

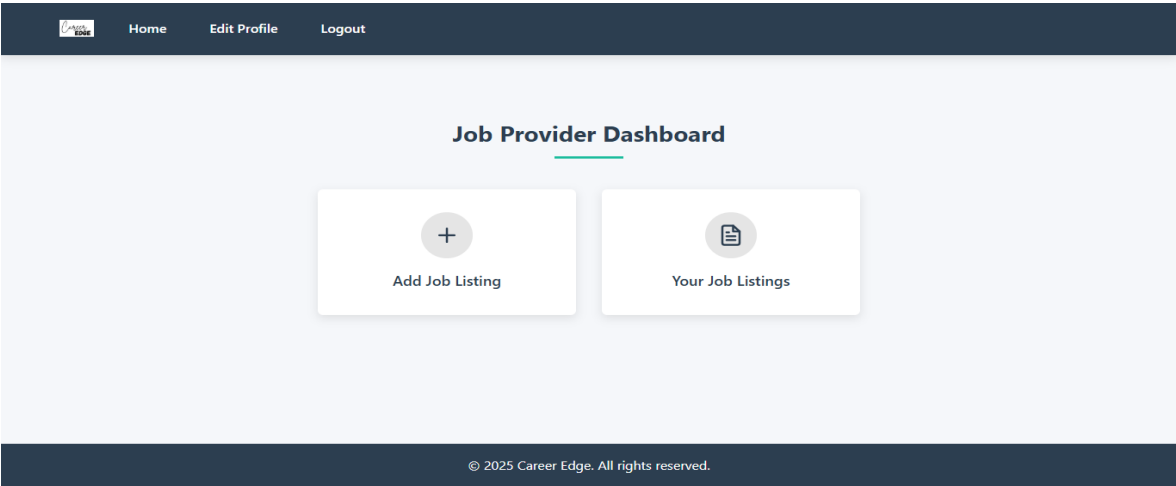


Figure 2.7.2: Provider Dashboard

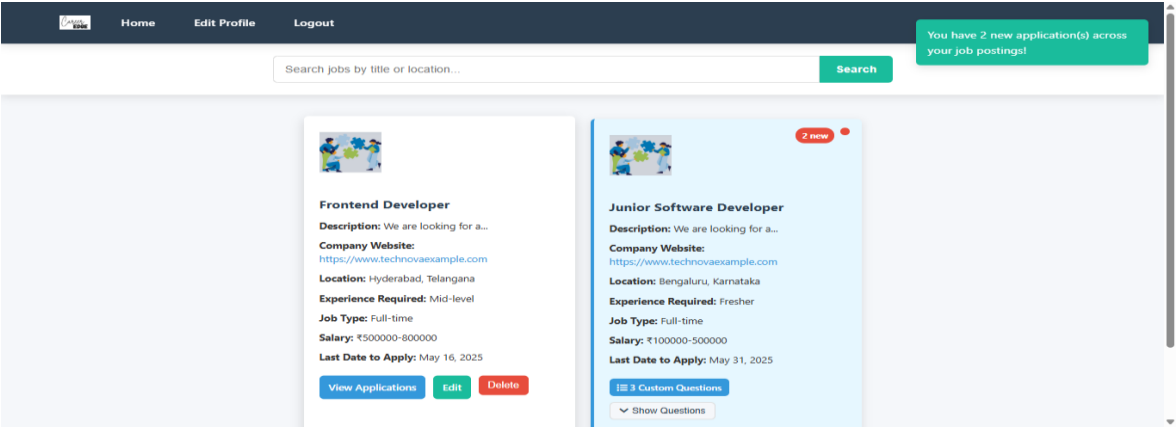


Figure 2.7.3: Job Listing

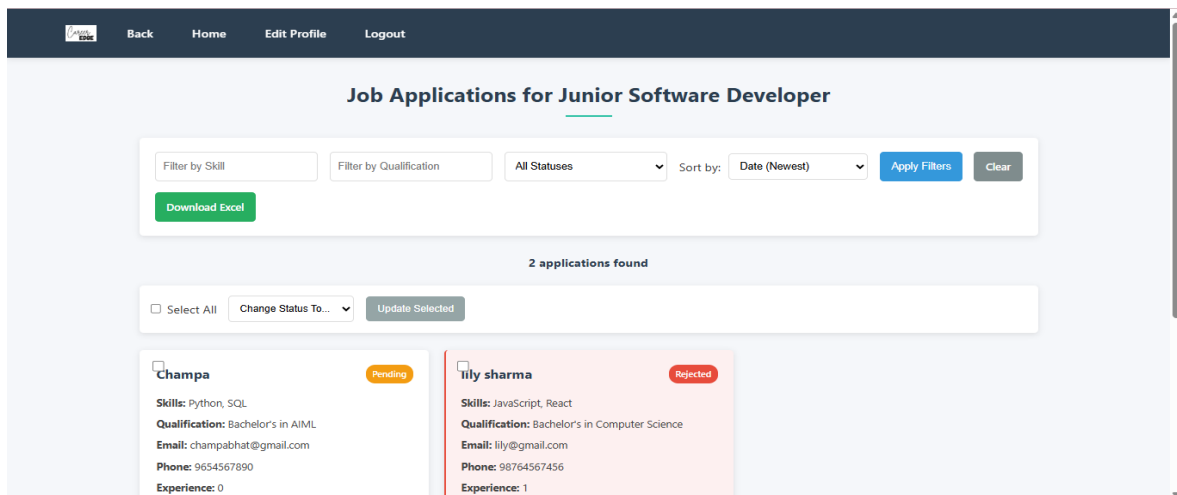


Figure 2.7.4: Job Application

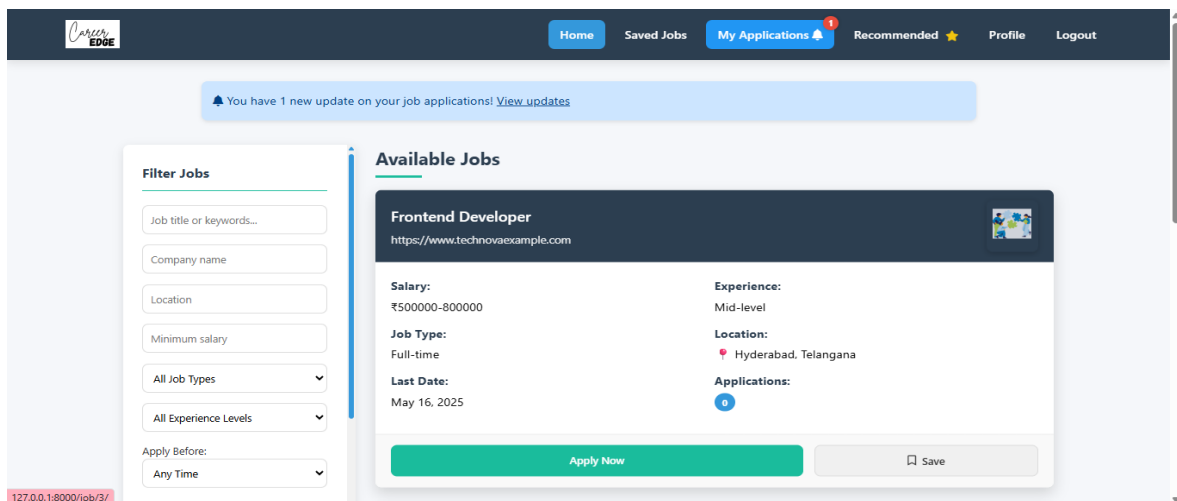


Figure 2.7.5: Seeker Dashboard

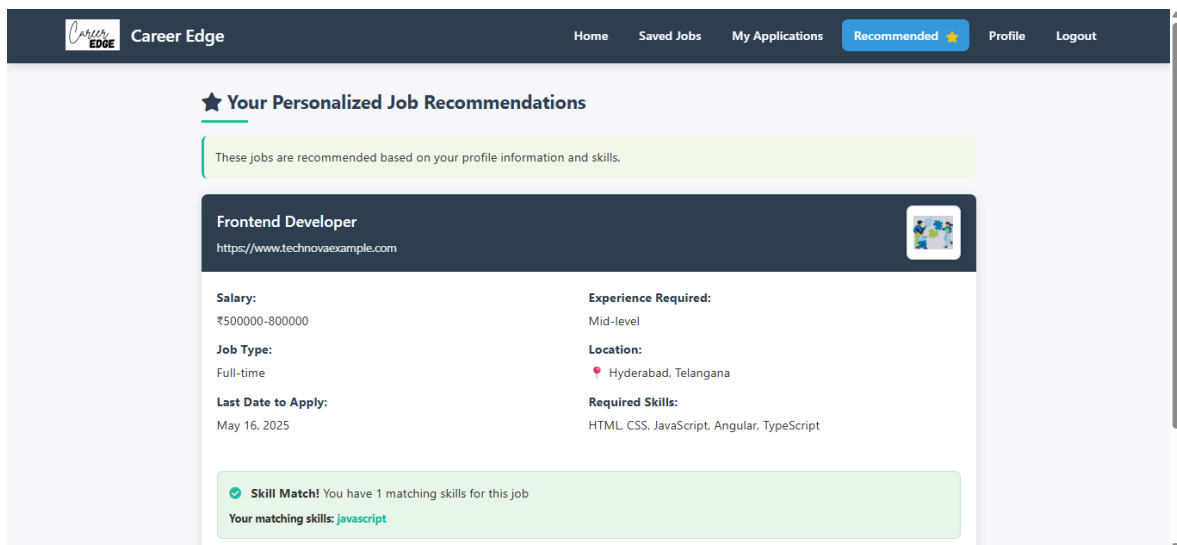


Figure 2.7.6: Job Recommendation

CONCLUSION

During my internship at Quantum Learnings, I built a strong foundation in web development by learning HTML, CSS, and JavaScript, which helped me understand how websites are structured, styled, and made interactive. I then progressed to working with the MERN stack (MongoDB, Express.js, React, Node.js), gaining hands-on experience in building full-stack applications and understanding how frontend and backend components communicate.

In addition to the internship, I independently developed a Job Portal using Django, where I applied my frontend skills along with Python-based backend development. This project helped me strengthen my understanding of database design, user authentication, and deployment. Together, these experiences have enhanced my technical skills and given me the confidence to work on real-world web applications.

Future Work

- **Automated Job Aggregation:** Implement web scraping, API integration, NLP, and deduplication to collect and standardize job listings from multiple platforms automatically.
- **AI-Powered Resume Analysis:** Use machine learning to review and suggest improvements for job seekers' resumes.
- **Advanced Analytics Dashboard:** Offer job providers deep insights into application trends and candidate data.
- **Interview Management System:** Build a scheduling and feedback system integrated with calendar apps.
- **Mobile Applications:** Develop native Android and iOS apps for greater reach and convenience.
- **Skill Assessment Tools:** Include pre-employment tests to validate candidates' skills before hiring.

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Vishwothama Nagar, Bantakal-574 115, Udupi District, Karnataka, INDIA



STUDENT FEEDBACK ON INTERNSHIP

Student Name: Vaishnavi Rao.B USN: 4mwa1cs113
Supervisor Name: Parth Sathya, Deepak Kumar Sharma Designation: Technical subject matter Expert
Company/Organization: Quantum Learning, Bangalore
Address: 2nd floor, Express New City Complex, 13/36, NR Road, Bangalore, Karnataka - 560002
Dates of Internship: From 06/11/2024 To 16/04/2025

Give a brief description of your internship work (title and tasks for which you were responsible):

Indicate the degree to which you agree or disagree with the following statements.				
This internship experience has:	Strongly Agree	Agree	Disagree	Strongly Disagree
Allowed me to apply classroom theory to practice	✓			
Helped me to develop my decision-making and problem-solving skills	✓			
Expanded my knowledge about the corporate world prior to permanent employment	✓			
Expanded my sensitivity to the ethical implications of the work involved	✓			
Given me a chance to improve my leadership and interpersonal skills		✓		
Helped me learn to handle responsibility and use my time wisely	✓			
Helped me discover new aspects of myself that I didn't know existed before		✓		
Helped me to develop new interests and abilities	✓			
Helped me to clarify my career goals		✓		
Allowed me to acquire information and use equipment not available at my institute		✓		

What has been the most significant accomplishment or satisfying moment of your internship?

I have learnt various new tech stacks used in the corporate world like MERN, AI models etc... used for development.

What did you dislike about the internship?

Nothing

Considering your overall experience, how would you rate this internship? (Circle one).

(Satisfactory/ Good / Excellent)

Give suggestions as to how your internship experience could have been improved.

More hands on session & tasks

Date: 15/04/25

RB
Student Signature

QUANTUM LEARNINGS, BANGALORE



EVALUATION OF INTERN BY SUPERVISOR

Student Name: Vaishnavi Rao. B USN: Amw21CS113
Supervisor Name: Paath Sarthee, Deepak Kumar Sharma Designation: Technical Subject Matter Expert
Company/Organization: Quantum Learning, Bangalore
Address: 2nd Floor, Express New City Complex, 13/36, NR Road Bangalore
Dates of Internship: From 06/11/24 To 16/04/25 Karnataka
560002

Please evaluate the intern by indicating the frequency with which you observed the following behaviors				
Parameters	Needs Improvement	Satisfactory	Good	Excellent
Behavior of Intern				✓
Is punctual				✓
Shows interest in work				✓
Analyzes problems effectively				✓
Shows initiative				✓
Demonstrates creativity/originality				✓
Accepts responsibility				✓
Uses technical knowledge and expertise				✓
Has a professional attitude				✓
Cooperates with co-workers and supervisors				✓

Overall performance of student intern (*circle one*):

(Needs improvement / Satisfactory / Good / Excellent)

Additional comments, if any:

Place: Bengaluru

Date: 16/04/2025


Signature of Internship Supervisor

For Quantum Learning's