



CODECELL-CMPN,VESIT

SYRUS HACKATHON 2025

Category Code: C1 (Open Innovation)


Problem Statement Title: EduTrade - Swap Skills, Gain Expertise

Team Name: Caffeine Coder

Institute Name: Vivekanand Education Society's Institute of Technology



Idea / Approach details (& implemented features)



Problem Statement: Many individuals struggle with limited access to quality education, skills mismatching job market demands, financial constraints, and lack of professional networks, leading to unequal job opportunities.

Solution Overview: EduTrade is an AI-powered platform that bridges the gap between learning and employment. It provides personalized skill assessments, free learning resources, AI-driven job matching, a Skill Swap Marketplace, and instant resume generation to help users secure sustainable careers.

User Roles & Features:

- **Learner:** Skill swap, job applications, study groups, AI recommendations.
- **Mentor:** Skill validation, learning sessions, career guidance
- **Employer:** Job postings, candidate reviews, interviews.



Innovation (Showstopper)

1. Skill Swap Marketplace

- Users exchange skills (e.g., coding for UI/UX) using a time-based token system.
- AI or manual matching ensures fair and relevant learning exchanges.

2. Job Market Integration

- AI-driven smart job matching connects users with relevant opportunities.
- Includes resume building, interview prep, and direct recruitment.

3. Instant AI Resume & Portfolio Generator

- AI creates professional resumes, cover letters, and project portfolios.
- Real-time updates based on new certifications and work experience.

4. Gamified Skill Challenges & Hackathons

- Daily challenges, leaderboards, and digital badges for skill mastery.
- Community-driven hackathons to foster engagement and innovation.

5. Personalized Study Groups & Accountability Buddies

- AI matches users with peers and mentors based on learning goals.
- Virtual study groups with progress tracking for motivation.

6. Instant Skill Endorsements from Mentors

- Industry experts validate skills based on projects and performance.
- Enhances credibility, boosting job and freelancing prospects.



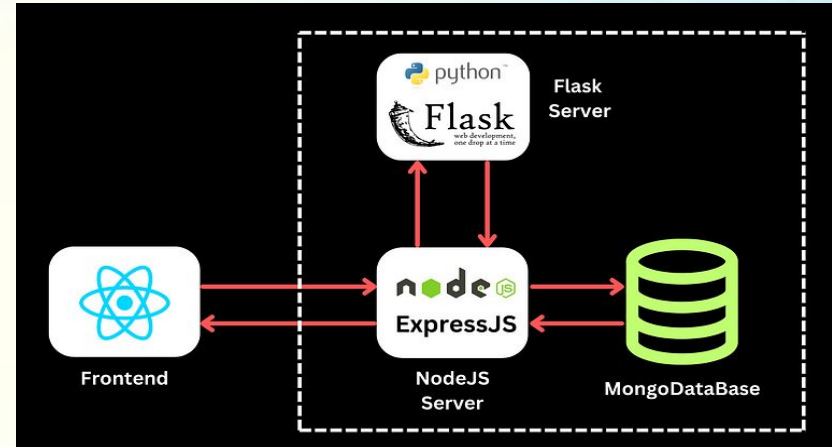
Tech Stack

Frontend: React.js

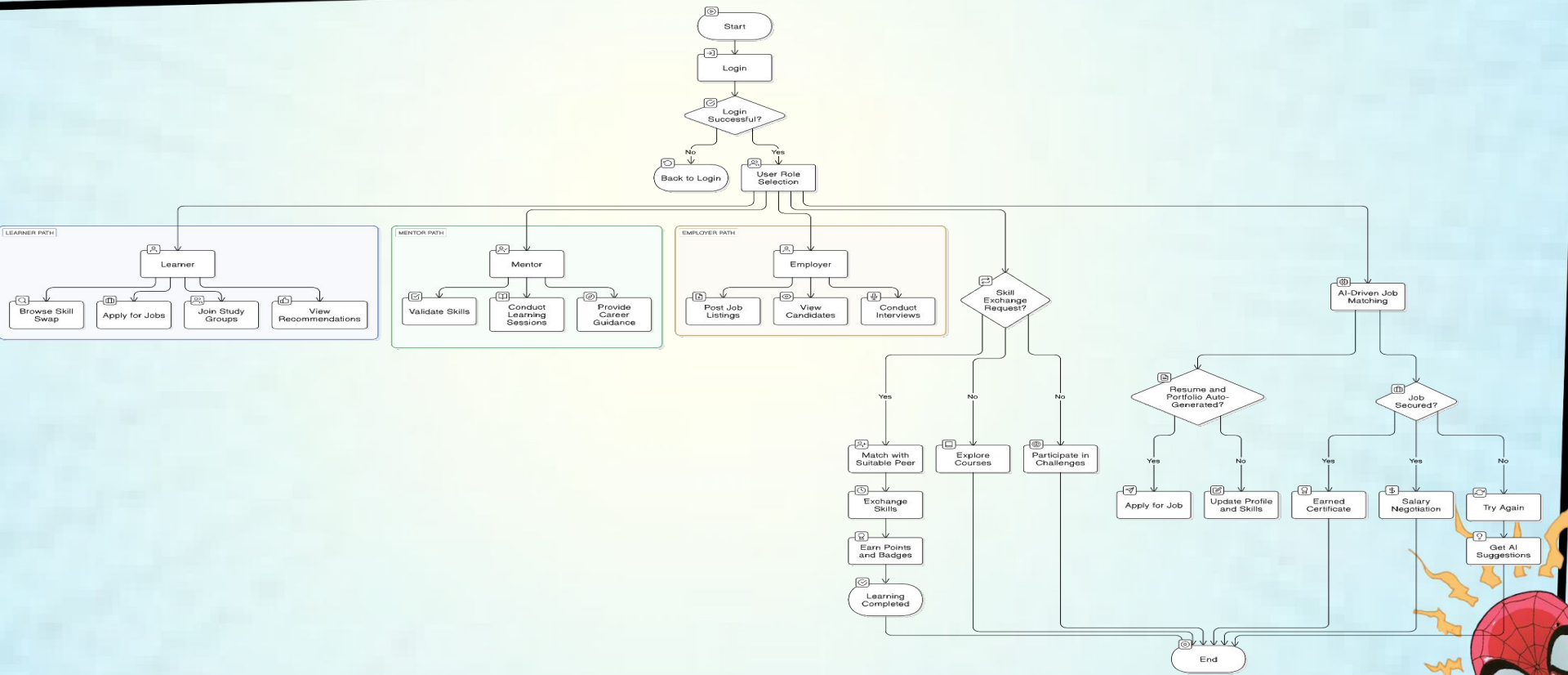
Backend: Node.js, Flask

Database: MongoDB

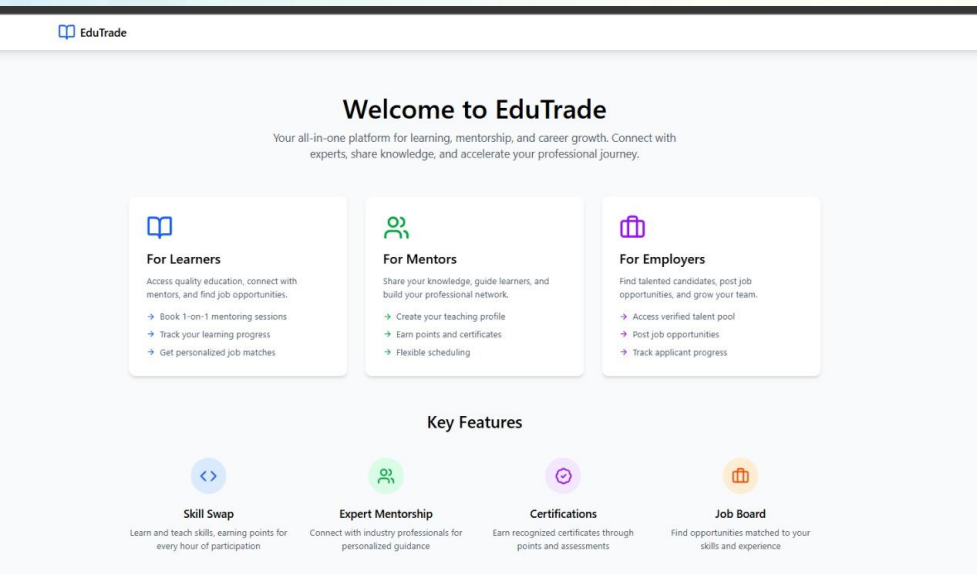
Machine Learning: Python



Use Case Diagram



Implementation

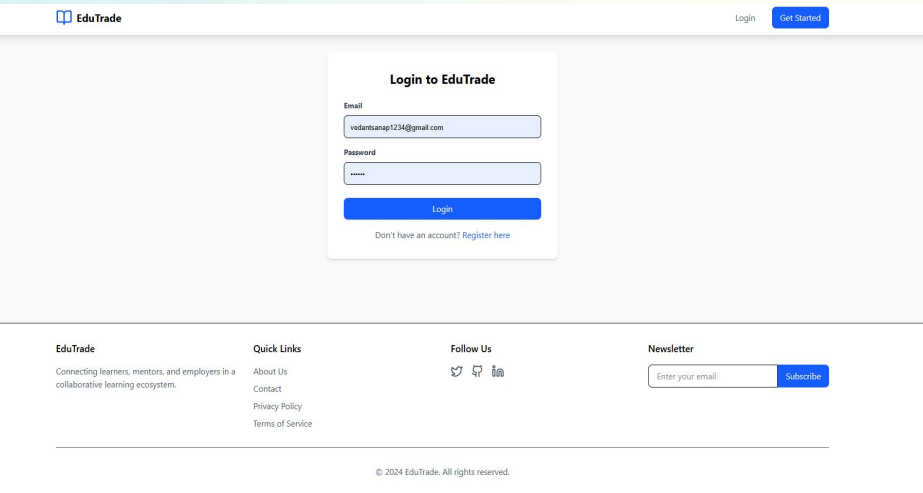


Landing Page

- **Welcome Section** – Introduces EduTrade as a platform for learning, mentorship, and career growth.
- **User Categories** – Sections for **Learners, Mentors, and Employers** with their respective benefits.
- **Key Features** – Highlights **Skill Swap, Expert Mentorship, Certifications, and Job Board**.
- **User Engagement** – Encourages **skill-sharing, learning progress tracking, and job matching**.
- **Modern UI/UX** – Clean, **responsive design using React.js and Tailwind CSS** for easy navigation.
- **Call to Action** – Directs users to sign up and explore the platform's services.



Implementation



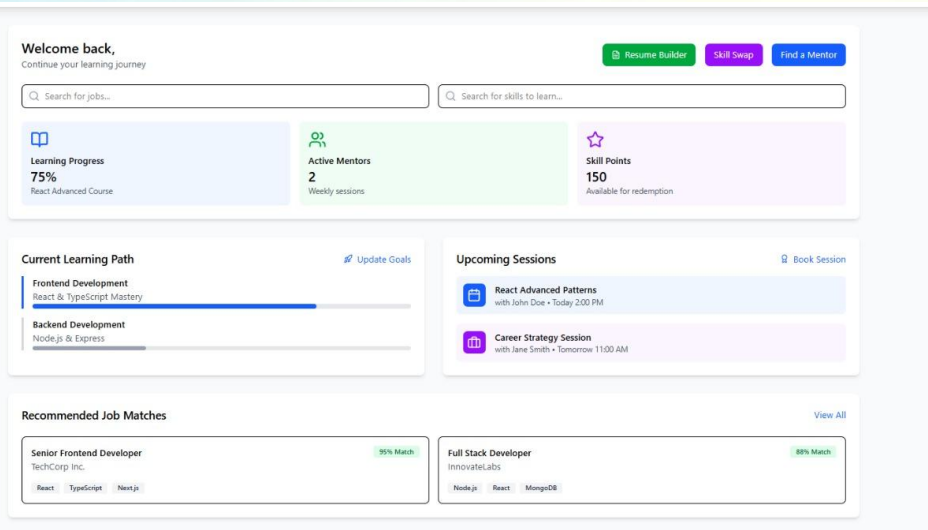
The screenshot shows the 'Login to EduTrade' page. At the top left is the 'EduTrade' logo. At the top right are 'Login' and 'Get Started' buttons. The main content area has a 'Login to EduTrade' heading, followed by 'Email' and 'Password' labels. The email field contains 'vedantsingh1234@gmail.com' and the password field has masked characters. Below these is a blue 'Login' button and a link that says 'Don't have an account? Register here'. The footer contains four sections: 'EduTrade' with a tagline, 'Quick Links' with links to About Us, Contact, Privacy Policy, and Terms of Service; 'Follow Us' with social media icons; 'Newsletter' with an email input field and a 'Subscribe' button; and a copyright notice '© 2024 EduTrade. All rights reserved.'.

Role Based Login

- **Role-Based Authentication** – Users log in with unique credentials and access features based on their role (Learner, Mentor, or Employer).
- **Secure Access Control** – Ensures restricted access to role-specific functionalities using authentication keys or tokens.
- **Learner Dashboard** – Provides access to courses, progress tracking, and feedback submission.
- **Mentor Dashboard** – Enables content creation, feedback management, and interaction with learners.
- **Employer Dashboard** – Allows job postings, candidate searches, and engagement with potential hires.
- **Session Management** – Uses JWT or OAuth for secure login sessions and role verification.



Implementation

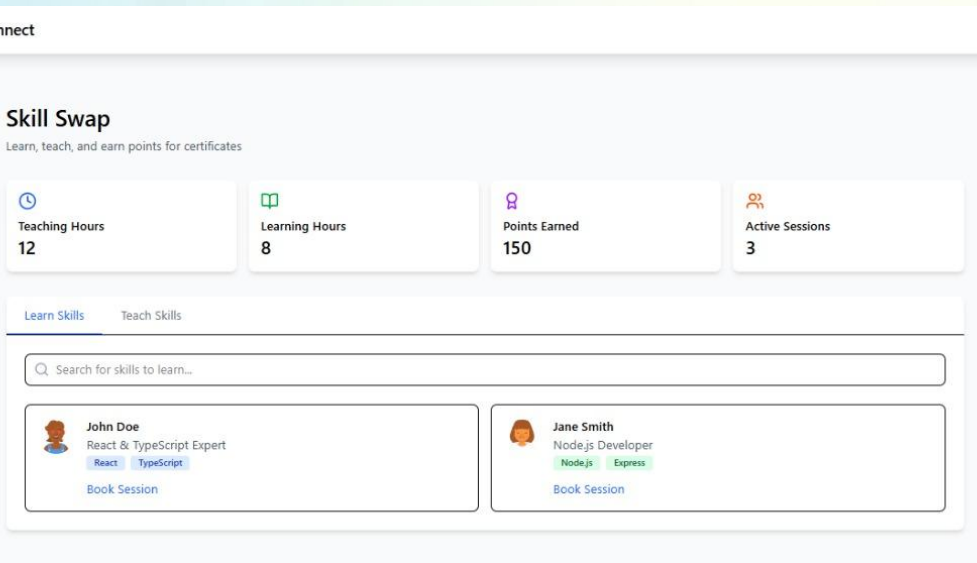


Learner Dashboard

- **Personalized Dashboard** – Displays learning progress, mentors, and available skill points.
- **Search & Navigation** – Users can search for jobs or skills to learn efficiently.
- **Current Learning Path** – Tracks progress in frontend and backend development courses.
- **Upcoming Sessions** – Scheduled mentoring sessions with topics and mentors.
- **Job Recommendations** – AI-driven job matches based on skills and progress.
- **Quick Actions** – Buttons for **Resume Builder**, **Skill Swap**, and **Find a Mentor** for career growth.



Implementation

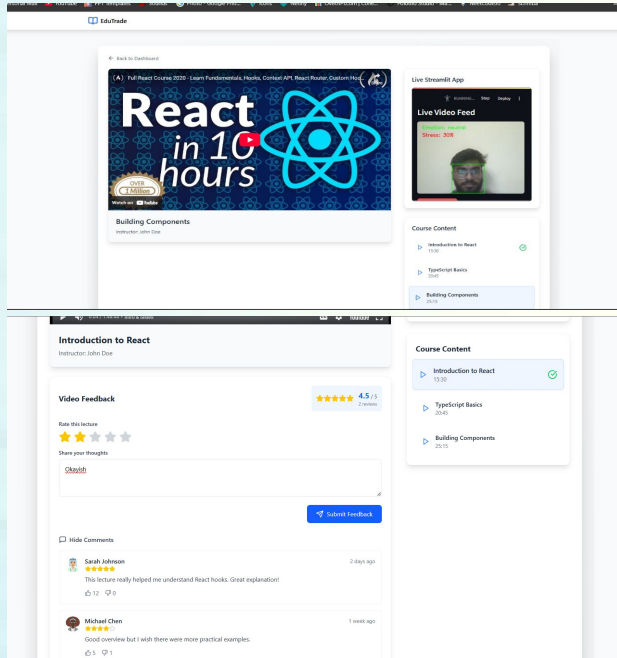


Skill Swap

- **Learn & Teach Skills** – Users can exchange skills to earn points and certificates.
- **Performance Tracking** – Displays **Teaching Hours, Learning Hours, Points Earned, and Active Sessions**.
- **Search & Discover** – Users can find experts based on skills like **React, TypeScript, Node.js, etc.**
- **Book Sessions** – Allows easy scheduling of skill exchange sessions with mentors.
- **Dual Mode** – Users can **Learn Skills** or **Teach Skills** to contribute to the community.
- **Gamification** – Encourages participation by rewarding points for teaching and learning.



Implementation

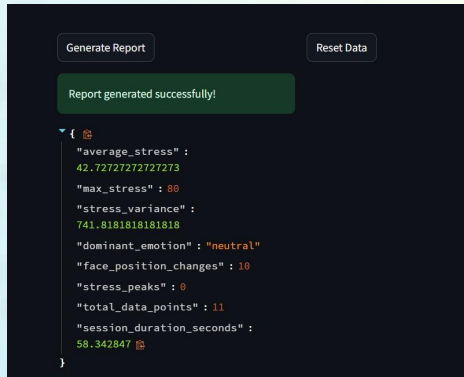
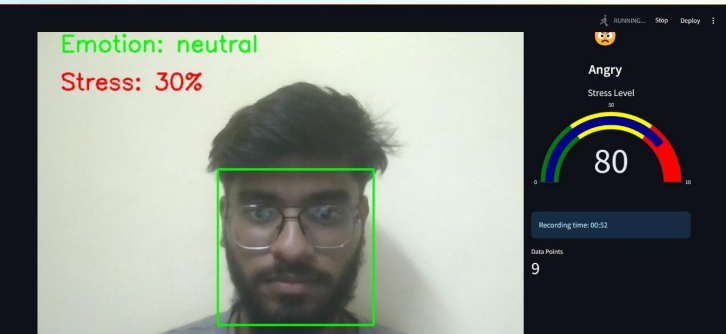


View Courses

- **Embedded Video Lectures** – Users can **watch courses directly** via an embedded YouTube player.
- **Live Emotion Analysis** – Integrated **AI-based emotion detection** shows real-time stress levels and emotions.
- **Course Progress Tracking** – Users can see **completed and pending lessons** in the course content list.
- **Instructor Information** – Displays **instructor name** and course details for better user engagement.
- **Structured Course Content** – Lessons are **categorized** with duration (e.g., **15:30 mins** for "Introduction to React").
- **Feedback System** – Enables users to rate and review course content.

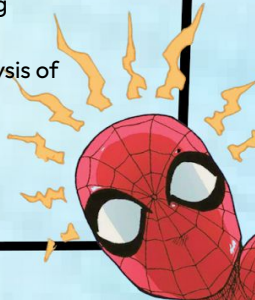


Implementation



Key Features of the Emotion and Stress Tracking System:

- **Real-Time Emotion & Stress Detection:** Captures emotions (neutral, angry, happy, sad) and stress levels on a 0-80% scale, with the dominant emotion recorded as neutral in this session.
- **Stress & Emotion Visualization:** Includes a stress timeline graph, an emotion distribution pie chart, and a heatmap linking facial positions to stress intensity.
- **Detailed Session Analytics:** Provides average stress (46%), maximum stress (80%), stress variance (693.3), and total recording duration (~58 seconds) with 11 data points.
- **Facial Tracking & Movement Analysis:** Tracks face position, detects subtle movements (10 recorded position changes), and uses a green bounding box for face detection.
- **Correlation Between Emotion & Movement:** Analyzes how emotional states relate to physical movement, measuring movement in pixels and linking different emotions to varying activity levels.
- **Comprehensive Behavioral Insights:** Offers a multi-dimensional analysis of stress, emotions, and physical movement for better understanding of psychological responses.



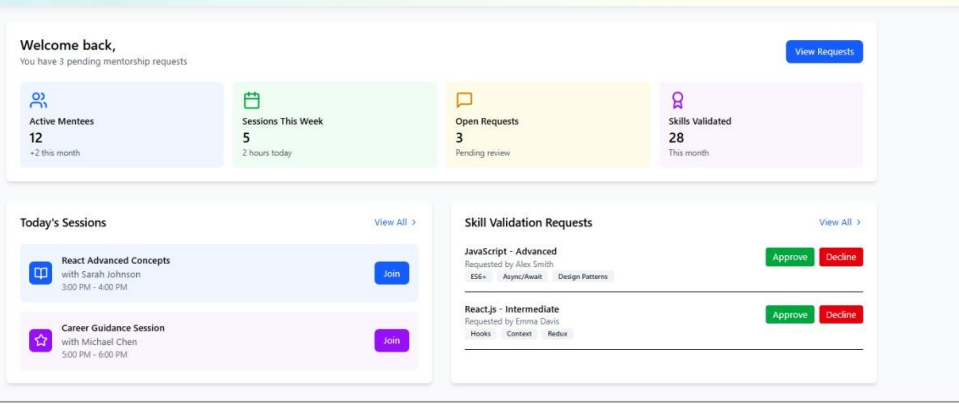
Implementation



1	2022-03-28 20:24:50	neutral	30	324	330	20.00273
2	2022-03-28 20:24:51	angry	40	332	331	5.53057
3	2022-03-28 20:24:52	happy	20	338	330	4.74054
4	2022-03-28 20:24:53	neutral	30	330	330	17.03398
5	2022-03-28 20:24:54	neutral	40	331	307	5.83394
6	2022-03-28 20:24:55	neutral	40	340	307	3
7	2022-03-28 20:24:56	neutral	30	331	308	2
8	2022-03-28 20:24:57	neutral	30	340	317	6.10053
9	2022-03-28 20:24:58	neutral	30	330	301	4.73337
10	2022-03-28 20:24:59	neutral	30	347	308	5.83394
Average Stress		46.0%	Stress Variance	693.3	Dominant Emotion	Neutral



Implementation

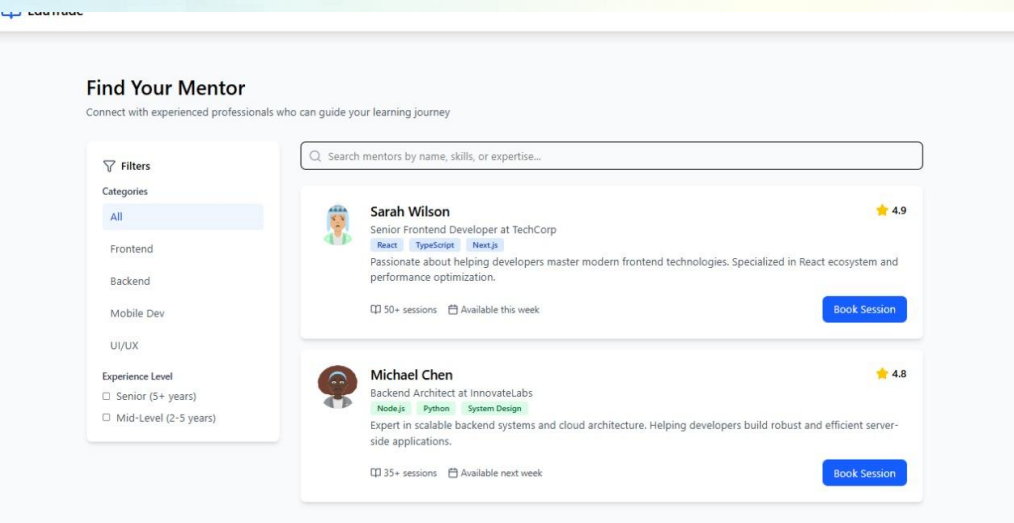


Mentors Dashboard

- **Mentee Management** – Track and manage **active mentees** and their progress.
- **Session Overview** – Displays **upcoming mentorship sessions** with mentees.
- **Skill Validation** – Approve or decline skill validation requests from learners.
- **Pending Requests** – View and manage **mentorship and skill validation requests**.
- **Performance Metrics** – Shows **sessions conducted, open requests, and skills validated**.
- **Quick Actions** – Easy access to **joining sessions, approving skills, and handling requests**.



Implementation

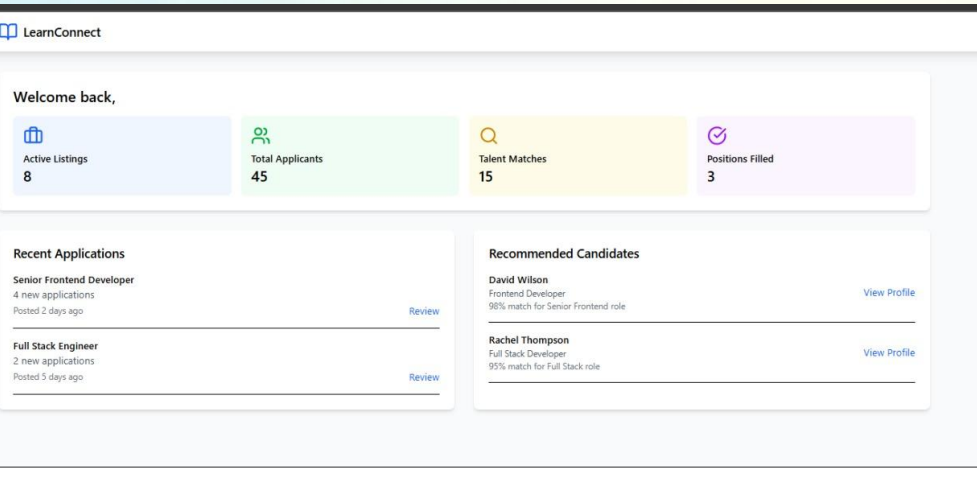


Finding Mentor

- **Mentor Discovery** – Users can search for mentors based on skills, expertise, or name.
- **Filtering Options** – Categories include **Frontend, Backend, Mobile Dev, and UI/UX** with experience levels.
- **Mentor Profiles** – Displays mentor details like **name, role, skills, rating, and availability**.
- **Session Booking** – Users can **book sessions** directly from the mentor's profile.
- **User Ratings & Experience** – Mentors are rated (★4.8, ★4.9) based on sessions conducted.
- **Session Availability** – Indicates **when a mentor is available** for booking.



Implementation



Employers Dashboard

- **Job Listings Overview** – Employers can track **active job postings** and **positions filled**.
- **Applicant Tracking** – Displays **total applicants** and **talent matches** based on job fit.
- **Recent Applications** – Lists newly received applications with **job titles**, **posting dates**, and **review options**.
- **Candidate Recommendations** – Suggests **top-matching candidates** with **match percentage** (e.g., **98% match**).
- **Profile Review & Shortlisting** – Employers can **view candidate profiles** and shortlist potential hires.
- **Hiring Efficiency Insights** – Tracks **hiring success** through key metrics like **positions filled** and **applicant trends**.



Implementation

AI Resume Tailoring Assistant

Upload your resume and job description to create a perfectly tailored application

Upload Your Current Resume

Drop your resume here

Supported formats: PDF, DOC, DOCX

AI Resume Tailoring Assistant

Upload your resume and job description to create a perfectly tailored application

Enter Job Details

Job Title
Frontend Developer

Company Name
Vintar

Job Description
require frontend intern

Back Optimize Resume

Optimized Resume

Match Score: 65% ATS-Optimized

✓ Matching Keywords

React.js Node.js Full Stack MongoDB

JavaScript API Git Team Leadership

⚠ Missing Keywords

AWS Docker CI/CD Agile Unit Testing

AI Improvement Suggestions

- Add specific metrics and quantifiable achievements to demonstrate impact
- Include experience with cloud platforms and containerization
- Highlight any experience with Agile methodologies and team collaboration tools

Tailored Resume Preview

VEDANT SANAP
Full Stack Developer
Contact: 8779784305 | vedantsanap123@gmail.com | LinkedIn | GitHub | Leetcode

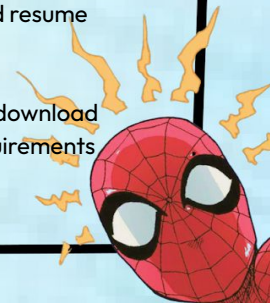
PROFESSIONAL SUMMARY

Dedicated Full Stack Developer with hands-on experience in building web applications using modern technologies. Proven track record in developing user-centric solutions and leading technical teams. Strong foundation in both frontend and backend development with expertise in React.js, Node.js, and database management.

TECHNICAL SKILLS

AI Resume Optimizer

- **Resume Upload & Parsing** – Users can upload their resume in PDF, DOC, or DOCX format. The system extracts and analyzes the resume content.
- **Job Details Input** – Users enter job details like title, company name, and job description to tailor the resume accordingly.
- **Keyword Matching & Score** – The system compares the resume against the job description, highlighting matching and missing keywords, and provides a match score.
- **AI-Powered Improvement Suggestions** – The tool suggests enhancements such as emphasizing relevant skills, adding metrics, or highlighting project experiences.
- **Preview & Edit Option** – Users can review the AI-optimized resume content and make edits before finalizing it.
- **Download Optimized Resume** – Once satisfied, users can download the tailored resume, ensuring it aligns well with the job requirements and ATS (Applicant Tracking System) standards.



Implementation

Redeem Points

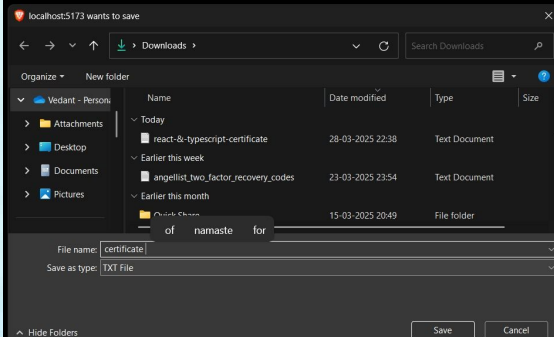
Available Points
150

React & TypeScript
50 points required

Redeem

Node.js Fundamentals
75 points required

Redeem



Redeem Points

- Users should only be able to redeem a reward if they have enough points.
- After redeeming, the available points should update in real-time.
- The "Redeem" button should be disabled if the user lacks sufficient points.
- Provide a confirmation prompt before deducting points.
- Show a success message and allow users to download their certificate after redemption.
- Consider implementing a history section where users can view past redemptions.



Future Objective

- 1. Peer-to-Peer Learning via Video Calls** – Enables live skill exchange sessions through secure video calls, fostering interactive learning and mentorship.
- 2. Decentralized Learning & Skill Verification** – Blockchain-based certificates for verified skill endorsements and decentralized skill records to ensure credibility across platforms.
- 3. Metaverse & VR-Based Learning Modules** – Immersive learning through VR-based training simulations and virtual skill swap rooms for hands-on experiences.
- 4. Smart Contracts for Skill Exchange & Payments** – Secure and automated transactions using blockchain to ensure fair exchanges and fraud prevention in freelancing & mentorship.
- 5. Automated AI Job & Internship Applications** – AI auto-applies to relevant jobs and internships based on user skills, with smart tracking of application status and interview scheduling.

