

CV Verification Portal

*An Internship Report
Submitted for partial fulfilment of the requirements for the
Degree of B.Tech
Under GIFT, AUTONOMOUS*

**By
Susil Kumar Nayak,
Registration No. 2201298221**



2025-26

*Under the guidance of
Prof. Pritiprava Mishra*

**Department of Computer Science and Engineering
Gandhi Institute for Technology (GIFT)
Autonomous
Bhubaneswar - 752054, Odisha, India**

Declaration

I, Susil Kumar Nayak, hereby declare that this internship report entitled **“CV verification portal”**, for partial fulfillment of the requirements for the Degree of Bachelor of Technology, is a Bonafide record of work carried out by me and the content included in this report is true to the best of my knowledge.

Date:12-12-2025

Susil Kumar Nayak
2201298221

Certificate of Internship Provider

❖ Not provided yet

Certificate

This is to certify that the Internship report entitled “**CV verification portal**” is a Bonafide record of work done by Susil Kumar Nayak (2201298221) under the supervision of Loresh Kumar Dash, at **Techgeering solutions Pvt. Ltd.**, in partial fulfilment of the requirements for the award of Degree of **B.Tech** under GIFT, AUTONOMUS.

Prof. Pritiprava Mishra
Internal Guide

Dr. Sujit Kumar Panda
HOD

Acknowledgement

I would like to take this opportunity to thank all those people whose invaluable contributions, directly or indirectly, have made this internship a great learning experience for me.

It is my honor to express my deepest sense of gratitude and appreciation to **Techgeering Solutions Pvt. Ltd.**, and my Guide, **Loresh Kumar Dash** for the valuable guidance, intuitive insights and persistent efforts to complete my internship successfully.

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I acknowledge with immense pleasure the sustained interest, encouraging attitude and constant inspiration rendered by **Dr. Trilochan Sahu (Principal)** and **Dr. Sujit Kumar Panda (HOD, dept CSE)**. Their selfless inspirations have always kept us moving forward.

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Susil Kumar Nayak

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1. Introduction

Backend development is a core component of modern software engineering, responsible for handling server-side operations, data management, business logic, and communication between the client interface and the database. Among the various technologies used for backend development, Node.js has emerged as one of the most prominent due to its speed, scalability, and flexibility.

Node.js is a powerful JavaScript runtime environment built on Google's V8 engine. It allows developers to use JavaScript not only on the client side but also on the server side, creating a unified development experience across the entire application. One of its major strengths is its event-driven, non-blocking I/O model, which enables Node.js to handle many simultaneous connections efficiently. This makes it particularly well-suited for real-time applications such as chat platforms, streaming services, and collaborative tools.

Additionally, Node.js provides access to a vast ecosystem of open-source libraries through npm (Node Package Manager), which significantly reduces development time and simplifies the integration of various functionalities. Its lightweight architecture, high performance, and strong community support have led many companies to adopt Node.js for building APIs, microservices, cloud-native applications, and enterprise solutions.

Importance of Internships

Internships provide practical exposure to real-world development environments, bridging the gap between theoretical knowledge and industry requirements. They help students understand workflows, improve technical proficiency, and develop teamwork, communication, and problem-solving skills. An internship also strengthens career readiness by offering hands-on project experience.

Motivation for Choosing This Internship

I was motivated to pursue this internship because it aligned with my interest in backend development and my goal to gain practical experience with Node.js. The opportunity to work on live projects, learn industry best practices, and collaborate with professional developers encouraged me to choose this specific internship.

Key Points About My Internship

- Worked on backend modules using Node.js and Express.
- Gained exposure to APIs, routing, authentication, and database connectivity.
- Learned real-time debugging.
- Participated in team discussions, sprint meetings, and code reviews.
- Improved understanding of backend architecture and problem-solving techniques.

2. Internship details

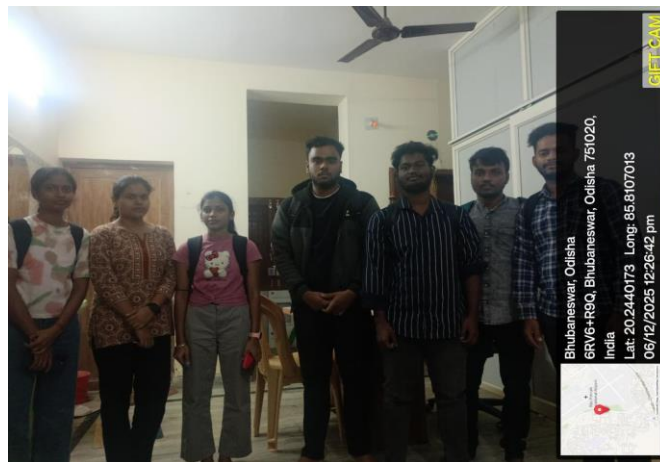


Figure 1: Geotag picture inside the company, Bhubaneswar

I am currently pursuing my internship at **Techgeering Solution Pvt. Ltd., Bhubaneswar**, where I am gaining structured, hands-on experience in backend development using **Node.js**. The organization serves as a reliable and supportive internship service provider by offering regular mentorship, clear task assignments, and exposure to real development workflows. As part of this ongoing internship, I work for **3 hours each day**, during which I am learning key backend concepts including server-side programming, RESTful API development, routing techniques, middleware functions, and database integration using modern tools. Alongside the technical learning, I am also enhancing my proficiency in JavaScript, debugging methodologies, logical thinking, Git-based version control, and writing clean code. This internship is further helping me build essential workplace skills such as communication, teamwork, time management, and professional discipline. Overall, this ongoing experience is significantly strengthening my foundation in backend engineering and contributing to my readiness for future industry roles.

3. Project/Assignment Details

A simple CV management web application that provides user and admin portals to create, view, update, and delete resume records. The frontend is a React app built with Vite ([client](#)) and the backend is a Node.js + Express server (server.js) with JWT-based authentication and role checks. Data models include models/CV.js and models/User.js; routes for authentication, admin actions, and CV CRUD live in routes and middleware such as middleware/auth.js enforces access control.

- **Purpose:** Manage and administer CVs/resumes with separate user and admin experiences.
- **Key Features:** Admin login and panel, user panel, REST API for CV CRUD, JWT auth, role-based access control.
- **Tech Stack:** React + Vite (frontend), Node.js + Express (backend), JSON Web Tokens for auth, Mongo-style models (in models/).
- **Data Storage:** The project uses model files models/CV.js and models/User.js (Mongo-style Mongoose schemas are implied), storing user accounts and CV documents.
- **Auth:** JSON Web Tokens (JWT) secure endpoints. Tokens are issued at login and validated by middleware/auth.js; ensureAdmin or role checks guard admin-only routes.

Key Components & Responsibilities

- **client/src/components/*:** Presentational and container components for login, navigation (PortalNav.jsx), admin dashboard, and user panel.
- **api.js:** Centralized functions for making authenticated HTTP requests to the backend (login, fetch CVs, create/update/delete CVs).
- **routes/auth.js:** Endpoints for user/admin authentication (login, token issuance).
- **routes/cv.js:** RESTful endpoints for CV CRUD operations (GET list, GET single, POST create, PUT update, DELETE).
- **routes/admin.js:** Admin-only operations, likely aggregations and user/CV management.
- **middleware/auth.js:** Verifies JWT, attaches user info to requests, and returns 401/403 on failures.
- **utils/ensureAdmin.js:** Simple role check middleware that restricts access to admin routes.

Data Models (conceptual fields)

- **User**
 - name (string)
 - email (string, unique)
 - passwordHash (string)
 - role (string — e.g., "user" or "admin")
 - createdAt (date)
- **Cv**
 - userId (reference to User)
 - fullName, title, summary
 - education (array of entries)
 - experience (array of entries)
 - skills (array)
 - contact (object: email, phone, links)
 - createdAt, updatedAt

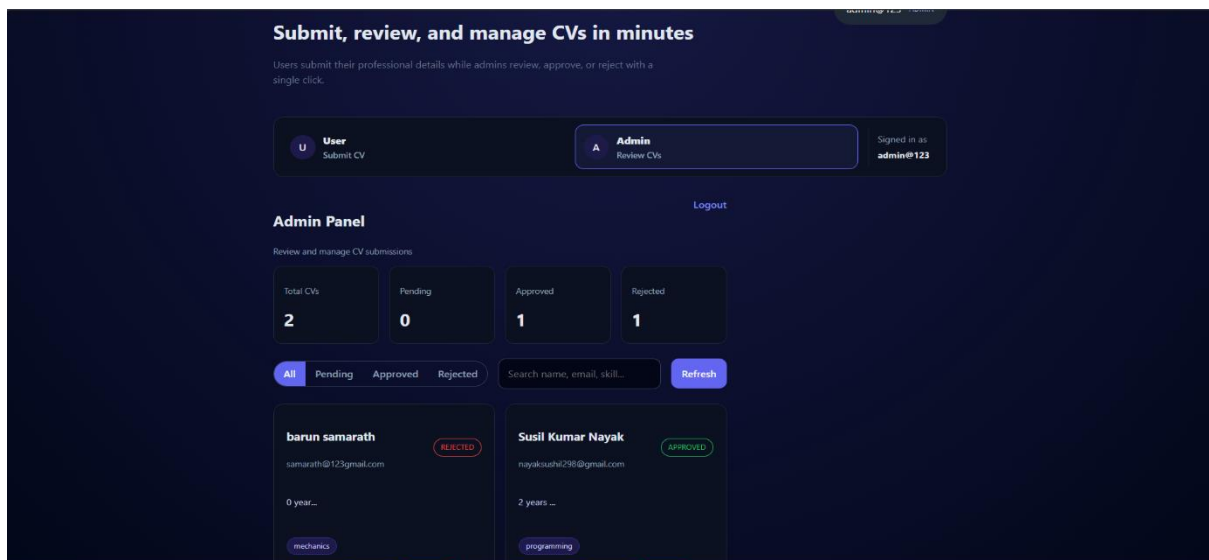
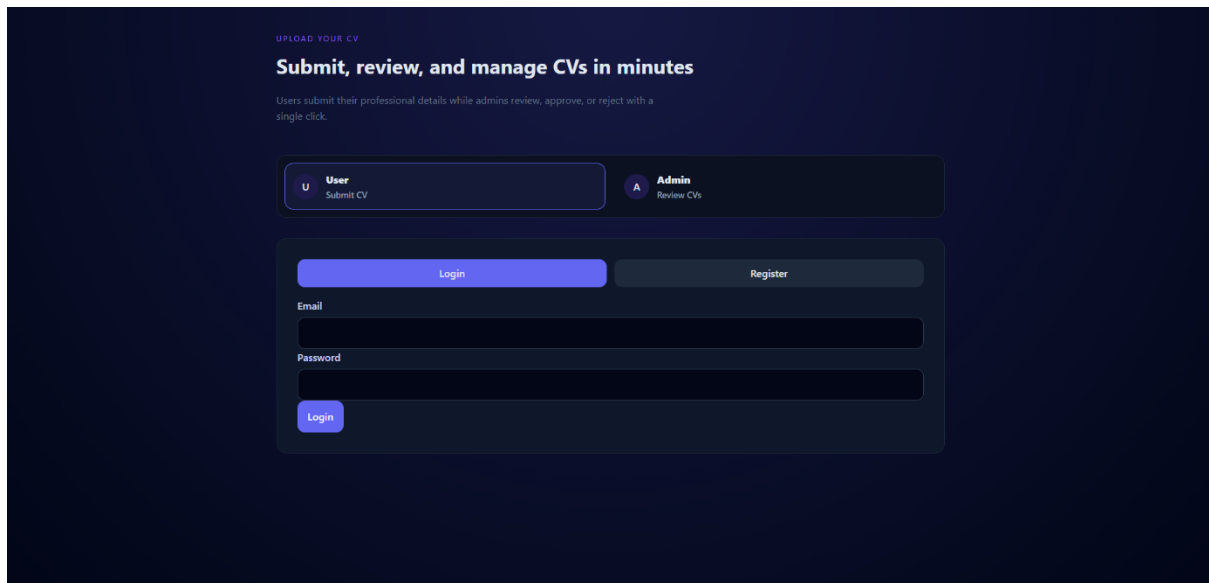
Main API Endpoints (typical)

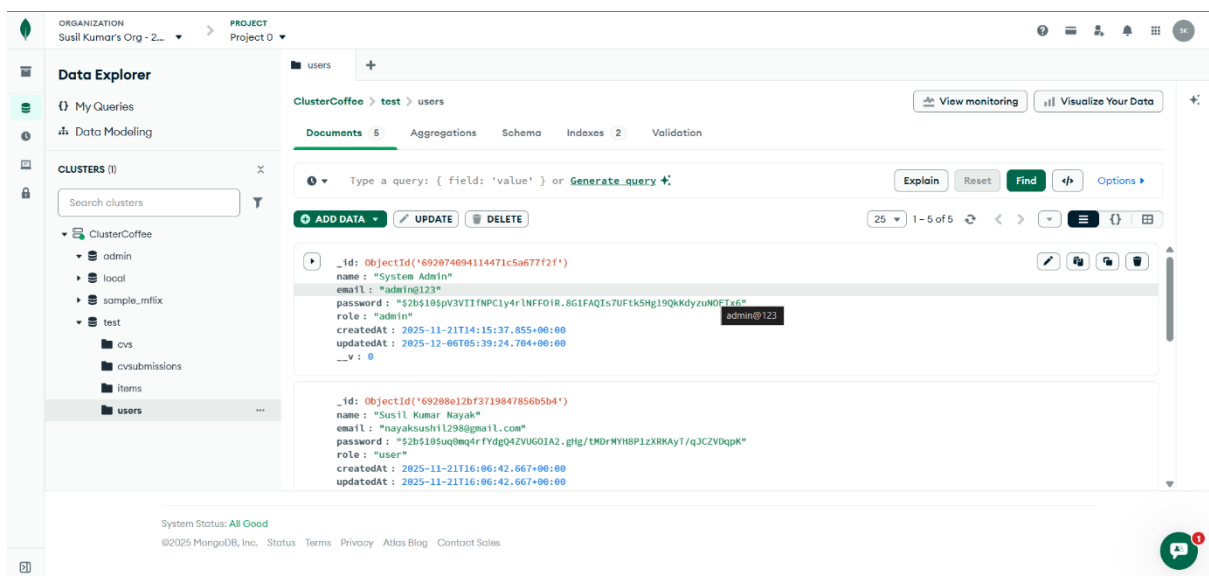
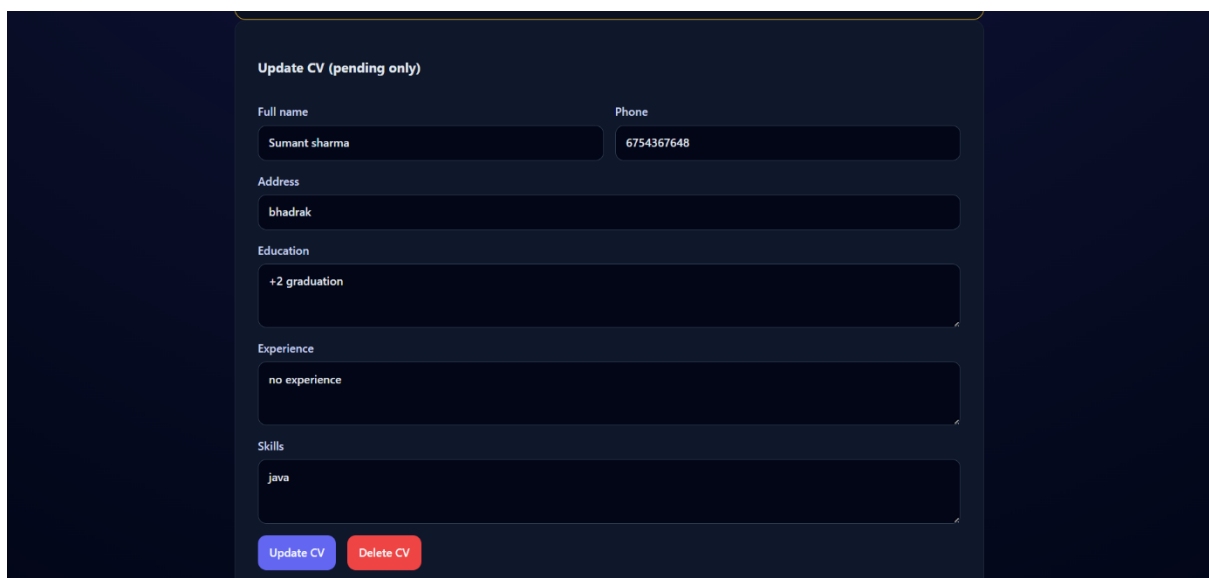
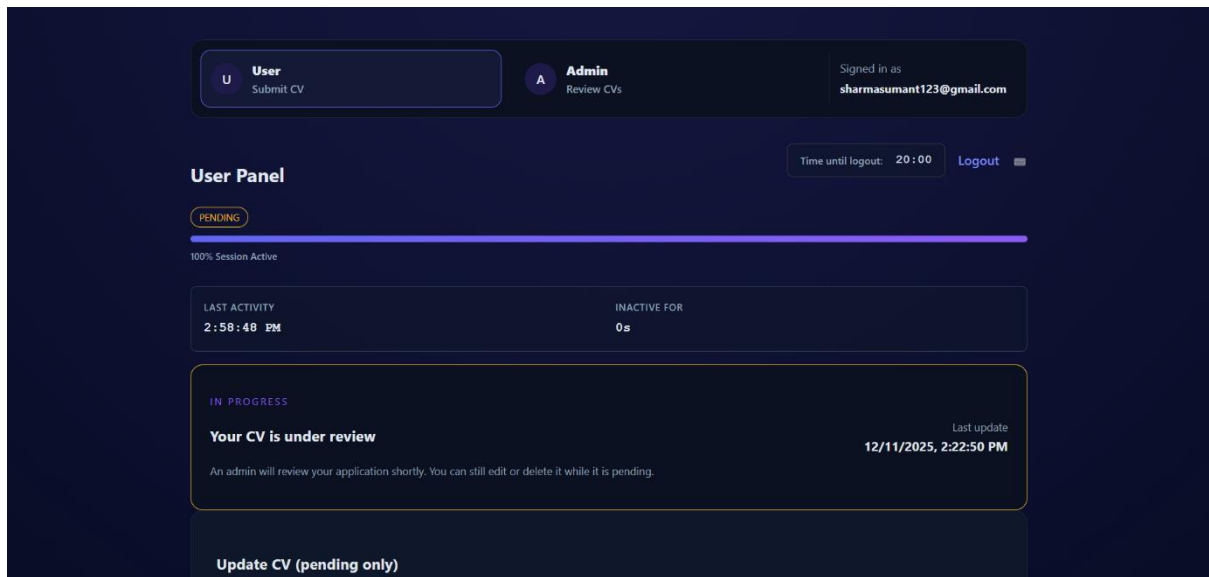
- POST /api/auth/login — Authenticate user/admin, returns JWT.
- POST /api/auth/register — (if present) Create new user account.
- GET /api/cvs — List CVs (user scope or admin all).
- GET /api/cvs/:id — Get a single CV.
- POST /api/cvs — Create CV (authenticated).
- PUT /api/cvs/:id — Update CV (owner or admin).
- DELETE /api/cvs/:id — Delete CV (owner or admin).
- GET /api/admin/... — Admin-only routes for management/overview.

Authentication Flow

- User submits credentials to POST /api/auth/login.
- Server verifies credentials, signs a JWT containing user id and role, and returns it.
- Client stores the token (e.g., memory or localStorage) and attaches Authorization header Bearer <token> to API requests.
- middleware/auth.js validates token and populates req.user. ensureAdmin checks req.user.role === 'admin'.

Output





4. Career Outcomes

The ongoing internship at Techgeering Solution Pvt. Ltd. has provided me with practical exposure to backend development using Node.js and its associated ecosystem. Through hands-on tasks such as building APIs, working with server-side logic, handling databases, and understanding request–response workflows, I have strengthened my technical foundation beyond classroom learning. I am gaining confidence in writing clean, efficient backend code, managing modules, and following best practices such as proper error handling and structured project design. This internship is also helping me understand real-world development processes, version control, teamwork, and how backend services integrate with frontend applications. These outcomes are directly aligned with my long-term career goals of becoming a skilled backend developer, as they are enhancing my problem-solving ability, improving my understanding of scalable application architecture, and preparing me for more advanced roles in the software industry. This experience is becoming a strong steppingstone toward building a successful career in backend engineering and full-stack development.

Beyond core programming, the internship has improved my ability to troubleshoot issues, debug efficiently, and optimize performance in server-side logic. Working under guidance has taught me how to follow documentation, collaborate using Git and GitHub, participate in code reviews, and understand how backend services are built, tested, and deployed in real-world projects. I am also developing time-management discipline, communication skills, and the confidence to tackle complex development tasks independently.

5.Conclusion

In conclusion, my ongoing internship at Techgeering Solution Pvt. Ltd. has been a highly valuable learning experience that has strengthened both my technical expertise and professional readiness. Working with Node.js in real project environments has helped me convert theoretical knowledge into practical skills, particularly in backend development, API design, and database handling. The exposure to real workflows, teamwork, and problem-solving has enhanced my confidence and prepared me for future challenges in the software industry. This internship is playing a crucial role in shaping my career path and has reaffirmed my goal of becoming a proficient backend developer capable of contributing effectively to modern, scalable applications.

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