

# RAJAT VERMA

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My Portfolio

## EDUCATION

Indian Institute of Technology, Mandi  
B.Tech. Engineering Physics with Minor in Computer Science - 7.26 CGPA  
Nov 2020 - June 2024

St. Antony's Inter College  
XII, ISC Board - 94% | X, ICSE Board - 94%  
April 2016 - March 2019

## WORK EXPERIENCE

Nucleus Software - (Software Engineer)  
July'24 - Present

- Collaborated with a team of engineers to develop and optimize **API Integrator** , integrating third-party APIs using **React** for the frontend and **Spring Boot** for scalable backend services, reducing data processing and manual intervention by **40%** .
- Implemented **Redis** caching, improving API response time by **50%** , and utilized **MongoDB** for flexible schema.
- Built interactive frontend components using **React**, **TailwindCSS** , enhancing API management usability and reducing errors by **30%** .
- Designed and deployed a robust **logging and monitoring** system using **Grafana** and **Prometheus** , enabling real-time tracking. Set up real-time alerts, ensuring maximum system uptime and proactively detecting failures.
- Optimizations in the database and by **normalizing tables** and leading the migration from **Oracle SQL** to **MongoDB** for better read performance and a more flexible schema aligned with business needs.

G1 Aqua | R-Tech Systems & Services - (Full Stack Developer)  
Jan'23 - Present

- Developed and maintain the **G1 Aqua** website using **NextJS**, **TailwindCSS** , and **ShadcnUI** ensuring **100% responsive** design.
- Built a **Progressive Web App (PWA)** for offline access and faster loading, caching, and enhancing user retention.
- Built sections for **30+ products** , educational content, blogs and integrated an enquiry form with email notif. using **Nodemailer**
- Optimized performance using **Google Lighthouse** , improving SEO score to **95+** , decreasing load times and LCP by **40%** .
- Managed **SEO & Ads** , increasing organic traffic by **60%** and improving search rankings with regular content updates.

Nucleus Software - (Software Engineer Internship)  
Jan'23 - June'23

- Developed REST APIs using **Spring Boot** to parse Excel and Word files with **Apache POI** , reducing manual data extraction time by **80%** . Integrated **Elastic Search** with **Node.js** to enable fast data queries, improving search response time by **60%** . Configured **Spring Scheduler** for bi-daily data updates, automating **500+** records processing per update. Implemented E2E testing with **Cypress** .
- Created UI for WiQR using **React** , **Redux Toolkit** , and **TailwindCSS** , improving user experience and reducing UI load time by **20%** . Implemented **JWT Authentication** with **Node.js** and **Express.js** **BCrypt** .

Anaemia Mukht Bharat - (Frontend Dev Volunteer) - Govt. Of Delhi Initiative  
June'23 - July'23

- Contributed in developing the frontend for the website of Anaemia Mukht Bharat campaign using **React & MUI** . Built KPI dashboards.
- Integrated Map of India for data visualization, various information pages and API Integration for contact and enquiry forms.

## PROJECTS

The Wild Oasis - A Client Side Rendered React App

- Built a **React** web app for hotel staff with **Supabase** for auth & CRUD, **React Query** for state management, **Dark Mode** via **Context API** , **React Hook Form** for forms, and **Styled Components** for UI.
- Developed an Admin Dashboard with **Rechart** for data visualization, plus sorting, filtering & pagination for cabins and bookings.

Adventour - A Server Side Rendered NodeJS App

- Developed a tour booking website using **Node.js**, **Express**, **Mongoose**, & **MongoDB** . Created REST APIs for tours, reviews, bookings along with MVC architecture, user authentication & authorization using **JSON Web Tokens (JWT)** .
- Secured API Routes using **Mongo-Sanitize**, **Helmet**, **XSS**, **HPP** . Password hashing with **Bcrypt** and **EJS** as View Engine.

## TECHNICAL SKILLS

- Languages** : JavaScript, TypeScript, Java, Python, C++
- Libraries/Framework** : React, React Native, NextJS, Express, Spring Boot, Mongoose, Hibernate, Tailwind, Prisma, Django, Flask
- Databases** : MongoDB, Redis, PostgreSQL, MySQL, Elastic Search
- Others** : NodeJS, SQL, PL/SQL, SASS, CSS, Git & Github, Docker, Supabase, Firebase, Postman, VSCode, IntelliJ, Object Oriented Design

## ACHIEVEMENTS

- Won 2nd Prize in AI Innovation 3.0 Hackathon - Yamaha Motor Solutions India among 40+ Teams & 4 Problem Statements. Developed a **React Native** mobile application enabling visually impaired users to identify surroundings through **touch gestures**, **voice commands**, and **real-time audio feedback**, enhancing accessibility.

## POSITION OF RESPONSIBILITY

- Coordinator of DevPrompt - Programming Club IIT Mandi - 2023
- Web Development Co-coordinator - (SNTC) Science and Technology Council IIT Mandi - 2023
- Web Development Head - Xpecto'23, Xpecto'22 Tech Fest | Miraz'24 Annual Fest | Volunteer - Astrax'22 Astro Fest - IIT Mandi