PRINCE RAJ

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EXPERIENCE

Backend for a Social Media Platform. (View here)   Feb - July, 2025

- Solely responsible for designing and building a robust and scalable backend API from scratch using NestJS for a social media platform, encompassing 30+ endpoints for user management, post creation, social connections, and other core features without compromising security and scalability.

- Implemented 5+ core features, like Sign in with Google (leveraging OAuth 2.0), OTP-based verification (using Brevo), profile customization (including profile picture upload, bio, location, etc.), and hashtags support in posts, etc.

- Designed and optimized the database schema using MongoDB, incorporating geospatial indexing for efficient retrieval of location-based data, to ensure scalability and efficient handling of a large volume of user data and concurrent requests.

ACHIEVEMENTS

Patent on IoT-Enabled Predictive Farming System with Resource Optimization   (View Doc. Here)
Application(202531042207 A) published by the Indian Patent Office, of Government of India on May 23, 2025

SKILLS

Languages	JavaScript, TypeScript, HTML, CSS
Technologies/Frameworks	Node.js, NestJS, ExpressJS, ReactJS, Google Firebase, Vercel, RESTful API, MongoDB, JQuery, Tailwind CSS, Tesseract.js (Image Processing)
Developer Tools	Visual Studio Code, Git, GitHub, Vercel, Postman, MongoDB Atlas, Cursor

PROJECTS

OCR-based Marksheet Scanner and CSV Converter Tool. (View here)

- Developed an open-source web-based OCR application using Tesseract.js that automates the conversion of mark sheets to CSV, handling 20+ fields of data per mark sheet like, student name, subject, grades.

- Developed custom utility functions with the proper documentation to extract relevant data from the mark sheets, ensuring accuracy of about 99% in the converted CSV format.

Profile Cards Generator. (Try it here)

- Created a full-stack website that generates shareable and personalized profile cards based on user-input data in real-time using a scalable API consisting of 5 endpoints, built using NodeJS and Express.

- Optimized API performance by implementing debouncing and field validations on front-end, resulting in significantly less load on server.

- Deployed on Vercel for efficient and reliable profile rendering, leveraging their platform's high availability infrastructure and achieving a 99.95% uptime rate.

EDUCATION

Bachelor of Technology, Narula Institute of Technology   2023 - 2027
Computer Science Engineering With Specialization in Artificial Intelligence and Machine Learning
CGPA(out of 10): 8.68

EXTRA-CURRICULAR ACTIVITIES

- Active member of the Coding Club and Google Developer Student Community at Narula Institute of Technology, participating in workshops, hackathons, and events organized by Google Developer Groups, Kolkata.