SOUMODEEP SAHA

+91-9883060948 | soumo2020.saha@gmail.com | LinkedIn | GitHub | Portfolio

PROJECTS

ONEPLACE-CBT | ***Next.js 16, React 19, TypeScript, Firebase (Auth & Firestore), Tailwind CSS, Google Gemini AI*** August-2026

- Optimized Database Queries by 89.6% (<190ms response latency) by eliminating N+1 subcollection reads, supporting 450+ concurrent users with zero-trust Firebase authentication and instant PDF scorecard generation.
- Integrated Gemini 3.5 Flash Multimodal Vision AI with cascading fallback models (3.5-flash ➔ 2.5-flash) to automate OCR extraction of math equations and MCQs from raw PDF/image booklets in seconds.
- Built an enterprise CBT engine with server-authoritative clock validation (45s network grace buffer) and state-based anti-cheating enforcing a strict 3-strike auto-submission policy.
- Links - GitHub , Live Demo

EXPERIENCES

AI Systems Engineer

PIXXEL ORBIT (Self-employeed) December 2025 - Present

- Production Deployment: Hosted and managed enterprise automation pipelines (n8n & OpenClaw) on AWS EC2 using Docker containers for real-time business clients.
- AI Voice Agents: Engineered live conversational voice assistants using Vapi AI, automated real-time slot booking, and handled dynamic streaming webhooks for client systems.
- RAG & Vector Pipelines: Built production RAG pipelines linking MongoDB/Postgres with LLM context windows, implementing semantic search and structured JSON extraction.

Backend Developer

October 2025 - March 2026

FAIRPAY TECHWORKS (Remote)

- AI Backend & Migrations: Built FastAPI APIs with SQLAlchemy ORM and managed database schema evolutions using Alembic.
- Prompt Engineering: Developed a centralized AI Prompt Library to standardize and automate LLM-driven workflows.
- Voice & AI Integration: Integrated Groq API for high-speed voice-to-text processing and real-time data handling.
- Flutter & Dashboards: Developed cross-platform features in Flutter and engineered dynamic dashboards for backend data tracking.

Full Stack Developer Intern

May 2025 - September 2025

GROWMINT LTD (Remote)

- Collaborated with a small development team to design and build responsive, production-grade web applications using Next.js, React, Tailwind CSS, and MongoDB.
- Optimized complex UI/UX workflows with animations, reusable components, and clean state management using Redux.
- Implemented modular component libraries and CI/CD version control workflows using Git/GitHub across agile sprint cycles

EDUCATION

MAKAUT UNIVERSITY

BACHELORS IN COMPUTER APPLICATION August 2022 - July 2025

SKILLS

- Frontend: React.js, Next.js, Redux, Tailwind CSS, Framer Motion, GSAP
- Backend: Node.js, Express.js, REST APIs, Socket.IO, JWT Authentication, FastAPI
- Database: MongoDB, Mongoose, Firebase, PostgreSQL
- Dev Tools: Git, GitHub, Postman, VS Code, Vercel
- Languages: JavaScript, TypeScript, Python, SQL
- Cloud & DevOps: Docker, AWS (EC2), Vercel, Linux/Bash, Alembic
- AI & Specialized: RAG Pipelines, Gemini Vision API, Groq, Vapi AI, pgvector