ANUVAB DAS

Kolkata, West Bengal | +91 6289434459 | dasanuvab38@gmail.com
LinkedIn | GitHub

PROFESSIONAL SUMMARY

Embedded Systems, Web & App Developer Engineer with hands-on experience across full-stack web development, cross-platform mobile applications, and embedded/IoT systems. Skilled in building end-to-end solutions—from hardware-level programming using microcontrollers and real-time systems to scalable web platforms and mobile apps using modern frameworks like React, Next.js, and Flutter. Strong focus on system design, performance, and real-world deployment of integrated software-hardware solutions.

TECHNICAL SKILLS

Languages: C, C++, Java, Python, SQL, JavaScript (ES6+), TypeScript, HTML5, CSS3
Frontend: React.js, Next.js, React Native, Flutter, Redux, Tailwind CSS, Sass
Backend: Node.js, Express.js, Vercel
Databases/BaaS: Supabase, Firestore, Firebase, MongoDB, PostgreSQL
IoT & Embedded: Arduino IDE, ESP-IDF, PlatformIO, STM32 Cube IDE/MX
Tools: Git, GitHub, VS Code, Postman, Proteus (Simulation), Figma, Docker

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PROJECTS

Smart Helmet Hardware System

- Engineered a modular embedded system using **ESP32 + STM32** for real-time rider safety and assistance.
- Designed and implemented **sensor fusion algorithms (IMU + barometer)** for accurate crash detection and event triggering.
- Built an **adaptive Active Noise Cancellation pipeline** using A2DP audio input, microphone feedback, DSP processing, and amplifier output.
- Developed a **low-latency multi-node communication system using ESP-NOW**, enabling real-time synchronization between helmet modules.
- Focused on **hardware-software co-design**, optimizing latency, power usage, and reliability under real-world conditions.

Android Auto App for Motorcycle Riders

- Developed an **Android Auto-compatible application** for navigation, communication, and smart helmet integration.
- Implemented **group ride coordination system** with automatic route synchronization across multiple users.
- Built **real-time voice and chat communication** using Agora RTC, ensuring low-latency interaction.
- Integrated **BLE-based communication** for helmet connectivity and audio/ANC control.
- Designed a **ride analytics dashboard** with cloud sync using Supabase and Firebase.

HealthCare+ – AI-Powered Health Assistant

- Built a **full-stack health-tech platform** featuring an AI-powered symptom analysis chatbot.
- Developed a **prescription scanner using image processing + AI**, extracting structured medical data (dosage, frequency).
- Implemented **secure authentication and user-specific data storage** using Firebase.
- Designed a **smart reminder system** for medication tracking and adherence.
- Leveraged **Google Gemini API** for contextual, symptom-aware health recommendations.

Renewable Energy Monitoring System (Microgrids)

- Designed and developed an **IoT-based monitoring and control system** using ESP32-S3 and electrical sensors.
- Implemented **real-time current and voltage monitoring** using ACS712 and ZMPT101B sensors.
- Built **automated safety logic**, including overcurrent protection and configurable threshold-based switching.
- Developed a **real-time web dashboard (MERN stack + Firebase)** for monitoring, analytics, and remote control.
- Integrated **hardware + cloud + frontend systems** into a cohesive, scalable solution.

ACHIEVEMENTS

- Secured 3rd Place at ShowcaseX, organized by Google GDG On Campus RCCIIT.
- Finalist at Hacksagon 2026 Nationals, organized by IEEE IIITM Gwalior.

SOFT SKILLS & LEADERSHIP

IgniteX Club RCCIIT:

IoT & Robotics Sub-Core Associate | Dec 2025 – Present
Student Member | Aug 2024 – Nov 2025

EDUCATION

1. B.Tech. in ECE (Pursuing) - RCC Institute of Information Technology, MAKAUT University, 2024 - 2028
2. Class XII - Delhi Public School, Ruby Park, Kolkata, CBSE Board, 2024
3. Class X - South Point High School, Kolkata, CBSE Board, 2022

DECLARATION

I hereby declare that all the information provided above is true to the best of my knowledge and can be verified upon request.

Place: Kolkata