

Sambaran Banerjee

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SUMMARY

Proactive and solution-driven Computer Science student with strong foundations in full-stack development. Proven experience building impactful web and mobile applications using React, Node.js, and cloud platforms. Achieved Top 14 globally in the Google Solution Challenge 2025. Proficient in responsive UI design, API integration, and collaboration in fast-paced environments. Seeking opportunities to contribute technical expertise while continuing to grow through challenging real-world projects.

EDUCATION

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|---|---|
| Jalpaiguri Government Engineering College
● <i>B.Tech in Computer Science & Engineering, MAKAUT</i> | Jalpaiguri
<i>September 2023 – August 2027</i> |
| Kendriya Vidyalaya No.1 Salt Lake
● <i>CBSE, Senior Secondary (Computer Science)</i> | Kolkata, India
<i>April 2021 – May 2023</i> |

PROGRAMMING SKILLS

- **Languages :** Python, C++, JavaScript, TypeScript, Go, SQL, NoSQL, HTML, CSS/SASS
- **Frameworks/Libraries :** ReactJS, ExpressJS, React Native, TailwindCSS, Bootstrap, Pandas, NumPy
- **Tools :** Git, GitHub, VS Code, Jupyter Notebook
- **Platforms :** Google Cloud, Firebase, Google Colab

OPEN SOURCE CONTRIBUTIONS

- | | |
|---|---------------------------------------|
| Baymax (Mental Health Companion App)
● <i>Backend Developer — Authentication, Firebase, AI Integration</i> | Remote
<i>April 2025</i> |
| ○ Developed and optimized Firebase Cloud Functions for AI-powered mood tracking and sentiment analysis using Google Gemini API. | |
| ○ Implemented secure Firestore rules to ensure privacy-first handling of sensitive user data. | |
| ○ Built backend logic for therapist booking system and real-time chat support with Firestore. | |
| Tiffin Fusion (Food Delivery Platform)
● <i>Frontend Developer — HTML, CSS, JavaScript, Stripe API</i> | Remote
<i>Feb 2025 - July 2025</i> |
| ○ Implemented Stripe payment gateway, reducing checkout failures by 30% | |
| ○ Fixed critical back-button navigation bugs across 15+ product pages | |
| ○ Enhanced checkout page responsiveness, improving mobile conversion by 22% | |
| ○ Designed meal visualization system showing images with order details | |

PROJECTS

Trayana - AI-Powered Disaster Management System (*React Native — Node.js — Twilio API — Google Maps API — Firebase*)

- **Core Implementation:**
 - * Built cross-platform mobile app with **React Native** (v0.72) and backend services using **Node.js**
 - * Implemented offline-first SOS panic button.
 - * Developed NGO/relief center locator with **Google Maps API** geofencing
 - * First-aid video library with offline caching
- **Future Roadmap:**
 - * Government dashboard for resource allocation analytics

- * Automated supply chain management system
- * AI-powered damage assessment using satellite imagery
- * Multi-language support for broader accessibility
- * Integrate **Twilio API** for real-time SMS alerts to citizens' phones.
- * Voice-activated emergency alerts with automatic location sharing

o **Achievements:**

- * This project was selected among 64000 registrations and 3700+ projects to be in the **Top 105** in the **Google Solutions Challenge**.
- * After this reached the final stage and was selected to be among the **Top 14** projects and we were called to present our solution in the **Google India**, Delhi office.

Q-Med - Medical Consultation Platform (*React-TS — Vite — Node.js/Express — MongoDB — JWT — TailwindCSS*)

o **Full-Stack Architecture:**

- * **Frontend:** React with TypeScript + Vite, featuring:
 - Theme system with dark/light mode persistence
 - Protected routes via AuthContext
 - Mobile-first responsive layouts (TailwindCSS + CSS Modules)
- * **Backend:** Express.js API with:
 - MongoDB/Mongoose for data modeling
 - JWT authentication with bcrypt hashing

o **Core Features:**

- * Doctor search with advanced filtering
- * Medical Q&A platform with threaded responses

o **Security Implementation:**

- * Role-based route protection
- * Encrypted local storage for client-side persistence

KEY COURSES & CERTIFICATIONS

- DevOps Basics for Everyone (edX)
- Introduction to Cloud Computing (edX)
- R Programming For Beginners

ACCOMPLISHMENTS

- **Finalist** - Got selected to be among the Top 14 teams in Google Solution Challenge Grand finale, 2025
- **Finalist** - National Science Congress, 2021
- **Regional Level Winner** - NCSC, 2019
- **Reached Regionals** - Smart India Hackathon, 2024

LEADERSHIP EXPERIENCE

- Led my team to the finals of the National Science Congress (2021)
- School Captain Boys (2022-2023)