HIRENDRA B

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EXECUTIVE SUMMARY

Innovative and results-driven developer with expertise in full-stack development, blockchain technology, and AI-powered solutions. Adept at problem-solving, collaborating in dynamic environments, and driving impactful digital solutions.

EDUCATION

- **Vellore Institute of Technology** (2023-2027)
  B.Tech. in Electronics and Computer Engineering
  CGPA: 8.29/10 | Chennai, Tamil Nadu
- **Narayana e-techno School, Chennai** (2021-2023)
  Math, Physics and Chemistry
- **Srimathi Sundaravalli Memorial School, Chennai** (2017-2021)

EXPERIENCE

1. Zhians (Software Development Intern) (Jul 2025 – Present)

- Built a **cross-platform fertility tracking app** using Flutter, combining **50+ health and lifestyle inputs** (menstrual cycle, sleep, stress, mood, etc.) to offer personalized reproductive health insights.
- Developed advanced features like **Fertility Score**, **Ovulation Prediction**, and **Womb Readiness Index** using real-time health data streams and custom decision logic.
- Integrated **Firebase Authentication**, **Firestore**, and **Cloud Functions** to enable secure user accounts, live syncing, and seamless multi-device support.
- Created a **Partner Sync Layer** to allow emotional and behavioral data sharing between connected users in real time.
- Implemented an **emotion-aware guidance engine** to send smart tips, reminders, and wellness insights based on tracked moods and activity.
- Added **WebRTC-powered video calling**, enabling users to book and connect with doctors, therapists, and yoga instructors directly within the app.
- Designed and launched an **in-app wellness marketplace** to browse and purchase curated products and services.

Tech Stack: Flutter, Dart, Firebase (Auth, Firestore, Cloud Functions), WebRTC, REST API, Git, CI/CD

2. The Entrepreneurship Network (MERN Stack Developer Intern) (Jun 2025 – Present)

- Led frontend and full-stack integration for the **TEN AI product website**, designed to promote and demo the company's conversational AI Agent platform.
- Built a modern, responsive UI using **React.js**, **Tailwind CSS**, and **Framer Motion**, enhanced with **GSAP animations** to deliver a sleek user experience.
- Integrated the **GROQ API** to simulate intelligent AI agent interactions live on the site, providing users with real-time, contextual chat demos.
- Developed **authentication workflows** and implemented a **Contact Us form** with Gmail integration via **Nodemailer**, sending confirmation emails upon submission.
- Handled complete **frontend-backend integration** using **Express.js** and **MongoDB**, ensuring efficient data routing and security.
- Worked closely with UI/UX and AI teams to translate vision into a performant, scalable product.

Tech Stack: MongoDB, Express.js, React.js, Node.js, Tailwind CSS, GSAP, Framer Motion, GROQ API, Nodemailer, Git, GitHub

SKILLS

- **Programming Languages:** Python, Java, C, C++, JavaScript, TypeScript, Dart, Solidity
- **Frontend Development:** React.js, Next.js, Flutter, Svelte, React Native, Tailwind CSS, Ether.js
- **Backend & Databases:** Node.js, Express.js, Firebase, MongoDB, PostgreSQL ,Prisma ORM
- **Tools & Platforms:** Git, GitHub, Docker, Postman, Vercel, Kaggle ,Google Colab, Google services
- **Soft Skills:** Team collaboration, Problem-solving, Time management, Leadership

PROJECTS

- **FocusForge: AI-Powered Productivity Platform**– Github Link
  - Built a full-stack productivity app combining a Pomodoro timer, task manager, and real-time biometric tracking to enhance focus and efficiency.
  - Integrated webcam-based stress detection and gaze tracking using **face-api.js** and **TensorFlow.js** for real-time distraction monitoring.
  - Implemented AI-driven session recommendations and visual productivity analytics for personalized improvement insights.
  - Engineered the entire stack using **React + TypeScript** (frontend), **Node.js + Express + MongoDB** (backend), and custom ML models for emotion and gaze detection.

- **Smart Helmet System** – Github Link

  - Co-invented and engineered a safety-focused smart helmet system integrating alcohol detection, overspeed monitoring, fall detection, and ignition control.
  - Built a cross-platform mobile app using **React Native (Expo)** with expo-sensors, expo-camera, and accelerometer modules for real-time data acquisition and safety alerts.
  - Interfaced an **ESP32 microcontroller** with an MQ-3 alcohol sensor and relay switch to disable vehicle ignition when alcohol is detected or helmet isn't worn.
  - Implemented real-time **fall detection** and **overspeed alerts** using accelerometer thresholds and GPS speed tracking, integrated with **Telegram API** for emergency notifications.
  - Designed and deployed a scalable architecture combining mobile frontend (React Native + TypeScript), microcontroller logic (C++ for ESP32), and mobile biometric or password for user authentication and cloud sync.

- **Mood Logging API: Wellness Data Microservice** – Github Link
  - Developed a RESTful backend microservice for logging user mood, cravings, food intake, and wellness notes.
  - Built with **Node.js**, **Express**, and **TypeScript**, using **PostgreSQL** (hosted on Neon) and **Prisma ORM** for schema modeling and database access.
  - Deployed the project on **Vercel** with production-ready routes prefixed via /api, designed for frontend integration and scalability.
  - Implemented full CRUD operations: create, read (by user), update, and delete mood log entries with robust data validation.
  - Provided detailed Postman/ThunderClient testing examples and automated schema management via prisma migrate and prisma generate.