

Koushik Roy

Full Stack Developer

hello@kroy.dev | +91 7797566023 | Dhupguri, Jalpaiguri, India
github.com/kroy665 | linkedin.com/in/koushik-roy-868492116 | kroy.dev

SUMMARY

Full Stack Developer with a Master's degree in Applied Mathematics and four years of professional experience spanning freelance client work and in-house product development. Currently focused on AI agent tooling, LLM-integrated applications, and IoT-connected systems, with a large body of independent open-source project work alongside client and employer engagements.

SKILLS

Languages: TypeScript, JavaScript, Python, MATLAB
Frameworks & Libraries: Next.js, React, React Native, Node.js, Express
Data & Infrastructure: PostgreSQL, Prisma, Redis, Docker
AI & Specialized: LLM agent design, E2B sandboxes, MQTT, IoT (ESP32), Figma plugin development

EXPERIENCE

- Full Stack Developer**
Advanced Non-Linear Technology Limited

2022 — Present

 - Own end-to-end delivery of full-stack web applications built with Next.js, TypeScript, and Prisma, from initial architecture through production deployment.
 - Design and build AI agent tooling and LLM-integrated features across multiple internal and client-facing products.
 - Work across the stack on IoT-connected systems, from embedded firmware through backend services to admin dashboards.
- Freelance Full Stack Developer**

2020 — 2022

 - Built and delivered a hotel management and booking website for Lakeview Hotel Lataguri, covering room bookings and guest services, still in production use at lakeviewlataguri.com.
 - Developed Highline Trader, a dealer-to-dealer marketplace platform for exotic and luxury vehicles, in React and TypeScript.
 - Delivered an IoT gym access-control system for a client, combining ESP32 hardware, MQTT messaging, and a Next.js management dashboard.
- Mathematics and Programming Tutor**
Chegg Expert

2018 — 2020

 - Provided one-on-one tutoring in mathematics and MATLAB-based numerical computing to university-level students.

SELECTED PROJECTS

- skull**
Python

 - Built a self-extending terminal AI agent that writes and registers its own callable tools at runtime, with long-term memory that automatically supersedes outdated facts and a two-stage contradiction-detection system backed by 264 automated tests.
- Code Editor Engine**
TypeScript

 - Built and published a headless, platform-agnostic code editor engine as an npm package, supporting files up to 100MB with LSP-compatible APIs, usable across React Native, web, and Electron targets.
- E2B Mobile App & Backend**
TypeScript, React Native, Express

 - Built a mobile client and backend for managing remote cloud development sandboxes, including a live in-app terminal over WebSockets, a git client, and an integrated AI pair-programming chat.
- Figma to HTML**
TypeScript

 - Built a Figma plugin using an agentic Gemini pipeline to convert email designs directly into production-ready, MSO-compatible HTML tables, automating a normally manual and error-prone hand-coding step.

EDUCATION

- M.Sc in Applied Mathematics**
The University of Burdwan

2016 — 2018
- B.Sc in Mathematics**
North Bengal University

2013 — 2016