Subhradip Sinha

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EDUCATION

Maulana Abul Kalam Azad University of Technology   Kalyani, WB
Computer Science and Engineering   *Aug. 2022 – Jul. 2026*
RHS – WBBSE, WBCHSE   Raniganj, WB
X: 93% (2020), XII: 92% (2022)   *2020 – 2022*

EXPERIENCE

Independent Developer & Community Contributor   2022 – Present

- Participated in hackathons including **SBILife Hack-AI-thon**, **Makathon**, and **Flipkart GRID 6.0**, showcasing problem-solving under time constraints
- Actively engaged in developer communities and events such as **Google Developer Group (GDG)** meetups and online tech sessions
- Published technical blogs on Hashnode, reaching over **1,000 readers**, covering full-stack development and cloud practices
- Reduced deployment cost of SaaS product **BudgetBee** by **30%** through infrastructure and CI/CD optimizations
- Deployed production-ready tools: **SubTerm** (a terminal emulator) and **PdfAI** (an AI-powered PDF assistant)

PROJECTS

Web IDE Development | *React.js, Node.js, Express.js, Socket.IO, Node-pty, Monaco Editor*   2025
- Developed a fully functional web-based IDE enabling users to write and execute code in-browser
- Integrated real-time terminal interaction using Node-pty and Socket.IO
- Implemented Express.js backend and React frontend with Monaco Editor for code editing
- Live: subterm.duckdns.org

PDF AI Chatbot (RAG) | *Next.js, Express.js, LangChain, BullMQ, HuggingFace*   2025
- Created an AI-powered assistant to answer questions from uploaded PDFs using RAG architecture
- Used BullMQ for queuing PDF jobs and LangChain with Hugging Face embeddings for NLP
- Built frontend in Next.js and backend API with Express.js
- GitHub: github.com/dipsubhro/pdf-AI

NPM Boilerplate Generator | *JavaScript, NPM*   2025
- Built and published a CLI tool to generate boilerplate project code from the terminal
- Simplified dev setup with customizable templates for various stacks
- NPM: boiling-code

Resell Service Platform | *Next.js, MongoDB*   2024
- Developed a full-stack e-commerce clone with CRUD features for products and users
- Focused on responsive UI, dynamic routing, and secure backend integration
- GitHub: github.com/dipsubhro/reseller

Typing Test Website | *Next.js*   2024
- Created an interactive typing test platform with live feedback on speed and accuracy
- Designed minimal UI and implemented logic for word randomization and WPM calculation
- Live: quiktype-one.vercel.app

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, C, OCaml, HTML/CSS
Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, LangChain, BullMQ, Socket.IO, Monaco Editor
Cloud & DevOps: Docker, AWS (EC2, S3, ECS), GitHub Actions, Redis
Developer Tools: Git, GitHub, VS Code, NPM, Postman, Vercel
Databases: MongoDB, PostgreSQL, Redis