

Dipanwita Bala | Full-Stack Developer

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Professional Summary

Full-stack developer working with Next.js, React, TypeScript, Node.js, and MongoDB. Comfortable building responsive UIs, designing backend APIs, and implementing authentication, authorization, and role-based access flows. I like owning features end to end—from architecture and data modeling to deployment—and learning by building, including experimenting with AI-driven features such as RAG.

Experience

Full-Stack Developer Intern - SiteSathi Infratech Pvt. Ltd., Remote

Oct, 2025 - Dec 2025

- Contributed to the development of a production-grade, multi-tenant customer dashboard for construction site management using React, TypeScript, and Tailwind CSS, supporting admin, user, and super-admin roles.
- Implemented role-based access control (RBAC), feature access scoping, and tenant-level data isolation within the existing platform.
- Designed and developed a separate internal operations dashboard to enable company teams to manage customers, feature access, and platform workflows.
- Developed and integrated backend APIs using Node.js, Express, and MongoDB with Mongoose, supporting core workflows including attendance management.
- Supported end-to-end feature delivery by handling bug fixes, writing and running tests, maintaining GitHub repositories, and assisting with production deployments.

Personal Projects

Memoir — Personal Knowledge Management Web App | GitHub | Live

Jan, 2026 – Present

Next.js, React, TypeScript, NextAuth, MongoDB, Cloudinary, Tailwind CSS, LangChain, Vercel

- Built a full-stack personal knowledge management platform (“second brain”) to save, organize, and browse links, videos, tweets, PDFs, and images with a clean, category-based and responsive UI.
- Designed and implemented secure authentication using NextAuth with email/password and OAuth (Google, GitHub), along with scalable backend APIs using Next.js Route Handlers and MongoDB with strict user-level data isolation.
- Integrated Cloudinary for efficient media uploads and previews, enabling secure handling of documents and images without server-side storage overhead.
- Built a Google Chrome extension using React for one-click content saving and implemented AI-powered knowledge querying using a RAG-based approach with vector embeddings, Pinecone, and Google Gemini Flash 2.5.

Formula 1 AI Chatbot (RAG-based) | GitHub | Live

Dec, 2025

Next.js, React, TypeScript, Pinecone, Google Gemini API, LangChain, Vercel

- Built an AI-powered chatbot for answering natural-language Formula 1 queries with accurate, context-aware responses.
- Scraped and ingested data from trusted Formula 1 sources using Puppeteer and LangChain, converting raw content into structured text.
- Used RecursiveCharacterTextSplitter for chunking and Pinecone batch ingestion to generate and store vector embeddings.
- Implemented query-time retrieval from Pinecone based on user prompts and augmented responses with relevant context.
- Designed context-aware prompts and integrated Google Gemini Flash 2.5 to generate grounded answers.

Technologies

Languages: Java, JavaScript (ES6+), TypeScript

Frontend: React, Next.js, Tailwind CSS, HTML, CSS, React Query, Axios

Backend: Node.js, Express, REST APIs, JWT

Databases & AI: MongoDB, PostgreSQL, MySQL, Pinecone, LangChain, RAG

Tools & Cloud: Git, GitHub, Postman, Mongoose, Zod, Vercel

Education

B.Tech in Electronics and Communication Engineering with Artificial Intelligence

Aug, 2021 - May 2025

Indira Gandhi Delhi Technical University for Women, Delhi

CGPA: 7.08/10