DIPANWITA BALA

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Education

B.Tech in Electronics and Communication Engineering with Artificial Intelligence

August, 2021 - May, 2025

Delhi

Indira Gandhi Delhi Technical University for Women

▶ CGPA: 7.08

▶ Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Database Management System, Operating System

Projects

Mindly - Second Brain Website | github | live

June 2025 - July 2025

React, TypeScript, Express.js, MongoDB, JWT, Zod, Mongoose, Axios, TailwindCSS, Axios, React Query, Render, Vercel

- ▶ Developed a full-stack productivity web application that allows users to store and organize important content links (images, videos, articles, audio) in a centralized knowledge base.
- ▶ Implemented both frontend and backend using TypeScript for enhanced type safety and maintainability. Designed robust Mongoose schemas and enforced strict validation using Zod for request payloads.
- ▶ Implemented secure user authentication using JWT.
- ▶ Used React Query for server side state management, data fetching and caching.
- Created a Chrome Extension that lets users save content directly from the browser in just a few clicks.
- ▶ Deployed the server application on Render and frontend on Vercel for easy and reliable hosting.

Chat Room - Real Time Chat App | github | live

July 2025

TypeScript, Node.js, WebSocket, Vite, React.js, TailwindCSS, Render, Vercel

- ▶ Built a full-stack real-time chat application using WebSocket protocol, enabling instant communication across multiple rooms.
- ▶ Developed the backend server using Node.js and the ws library to manage room-based connections, message broadcasting, and user sessions.
- ▶ Designed a responsive SPA frontend using React.js, Vite, and TailwindCSS with features like create/join chat room and live chat updates.
- ▶ Ensured modular architecture with separation of client and server directories for maintainability and scalability.
- ▶ Deployed the server on Render and frontend on Vercel for seamless real-time interaction and global access.

Technical Skills

Languages & Web: Java (Core, OOPs, Collections), JavaScript (ES6+), TypeScript, HTML5, CSS3, HTTP, WebSocket Frameworks & Libraries: React.js, Node.js, Express.js, Recoil, Axios, Mongoose, TailwindCSS, WS

Databases: MongoDB, MySQL

Tools & Platforms: Git, GitHub, VS Code, Postman, Zod, JWT, REST APIs Cloud & Deployment: AWS EC2, DigitalOcean Droplets, Vercel, Render

Roles and Responsibilities

Web Developer, E-Cell (2022–2023): Contributed to the design and development of the society website.

Head Coordinator, ECE Team – Innerve Tech Fest (2022): Led event planning and execution, ensuring high participation and smooth operations.

Achievements

- ▶ Solved 600+ problems on LeetCode with a 1426 contest rank.
- ▶ Research paper on "Audio Deepfake Detection using MFCC & CNN-BiLSTM" accepted at ICAISI 2025 (30–31May).