

Anshu Kumar Mandal

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IIT Mandi student specializing in Full Stack Engineer (React/TypeScript Python) with Cloud/DevOps skills and AI engineering. Experienced in building scalable backend systems and AI-driven apps.

EDUCATION

Indian Institute of Technology, Mandi

July 2023 – Present

B.Tech in Data Science and Engineering

CGPA: 7.90/10

High School (Science)

2021 – 2023

12th Board (CBSE)

Grade: 89%

TECHNICAL SKILLS

Programming Languages: JavaScript, **Python**, SQL (MySQL), C++, C [Project] [certificate] [Certificate]

Frontend / WebDesign: HTML5, CSS3, Tailwind, **React.js**, Next.js, Figma, Chart.js

Backend: Express.js, FastAPI, Flask, JWT, REST APIs, Socket.IO

Databases: MongoDB, MySQL, PostgreSQL, Redis

DevOps, Cloud & Tools: Docker, Linux / Unix-like Environments, **AWS**, Git, MLOps Basics

Data & Machine Learning: Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, NLP, GenAI [Certificate]

PROJECTS

AI Travel Agent – Full Stack Conversational Planner

2025

Next.js, React, TypeScript, Chart.js, Vercel [GitHub (Front-End)] [Web App Demo]

Python, Flask, REST APIs, LangChain, User Authentication, Twilio [GitHub (Back-End)] [Chatbot]

- Built the primary user-facing application from scratch using **Next.js 14** and **TypeScript**, featuring a **Chart.js** dashboard and deployed via CI/CD to **Vercel**.

- Architected a separate **Python/Flask** backend microservice to handle **secure user authentication**, session management, and all real-time AI logic.

Nirman Club Website – Student Chapter Platform

2025

React.js, tailwind, Component-Based, Responsive Web Design [GitHub] [Demo Video] [certificate]

- Architected the front-end using a **React.js component-based architecture**, creating a library of **reusable, atomic components** (e.g., event cards, member profiles), **Figma** wireframes and UI/UX mockups into a pixel-perfect, multi-page website.

- Implemented a **mobile-first responsive design** using media queries, optimizing static assets and component lazy loading for fast performance on **GitHub Pages**.

SchemeSeva – Govt Scheme Video Generator (Interdisciplinary Group Project)

2025

Python, FastAPI, AWS (e.g., S3, Lambda), Video Processing, NLP, React Native [GitHub] [Video]

- Engineered the complete backend data pipeline; architected **Python** scripts for **video concatenation**, audio synthesis, and automated generation of Hindi videos from policy text.

- Deployed and managed the backend infrastructure on **[AWS Service, e.g., S3/Lambda]**, designing the **FastAPI** to efficiently "present" (serve) the generated videos to the **React Native** client.

- Developed the core **NLP** model (K-NN semantic search) to accurately match user queries, integrating it as a key component within the main processing pipeline.

ACHIEVEMENTS

- **Mathematics Olympiad : RMO Rank 9 (2019–2020), INMO Eligible**

[Certificate]

- Solved 300+ LeetCode problems and 1700+ contest rating

[Certificate]

- **Internship at DataAvengers (Remote)**

[Certificate]

EXTRACURRICULAR ACTIVITIES

- **AOTS-JEC Programme on Japanese Business Culture** (METI-backed)

Sept 2025 [Certificate]

- **Competitive Programming Summer Camp** (IICPC - Inter IIT)

June 2024 [Certificate]

- **Content Head, Film Club** (Screenplay, Digital Storytelling) **NSS/GCS Volunteer**