

SANDEEP SINGH

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Professional Summary

Innovative Full Stack Engineer specializing in architecting AI-powered web ecosystems using Next.js, TypeScript, and Python (FastAPI). Expert in bridging the gap between robust backend architectures and autonomous AI agents using LangChain and LangGraph. Passionate about building scalable, type-safe applications that leverage Generative AI to solve complex user problems.

Technical Skills

Languages: TypeScript, JavaScript, Python, SQL
Frameworks: Next.js (App Router), React.js, FastAPI, Node.js, Redux Toolkit, Tailwind CSS
AI & LLM: LangChain, LangGraph, Gemini API, RAG Pipelines, ChromaDB
Database & Cloud: PostgreSQL, MongoDB, Prisma ORM, Redis, Docker, Cloudinary
Tools & Auth: Git, Docker Compose, Clerk, ShadCN UI, TanStack Query

Projects

ClassBuddy – AI-Powered Learning Management System

[Live Project](#) | [GitHub](#)

Tech Stack: React.js, Tailwind CSS, Redux, FastAPI, LangChain, LangGraph, Cloudinary, PostgreSQL

- Developed a collaborative AI-powered LMS enabling teachers to create dedicated content groups and manage student access effectively.
- Implemented an agentic workflow using LangChain and LangGraph to autonomously search, summarize, and structure educational content, reducing note creation time by 40%.
- Engineered a high-performance backend using FastAPI and PostgreSQL, ensuring secure endpoints and managing persistent user sessions with JWT authentication.
- Expanded the ecosystem with a companion mobile app built using React Native and Expo, providing students with seamless on-the-go access to quizzes and assignments.

AI Career Coach – AI-Powered Career Platform

[Live Project](#) | [GitHub](#)

Tech Stack: Next.js, JavaScript, Prisma, PostgreSQL, Clerk, Gemini, Tailwind CSS, ShadCN/UI

- Engineered a full-stack AI platform utilizing Next.js Server Actions and the Gemini API to provide users with instant resume scoring and cover letter generation.
- Architected a secure authentication system using Clerk, safeguarding user data and ensuring protected access to all AI-powered tools.
- Leveraged Prisma ORM and PostgreSQL to track and store user activity logs, enabling personalized insights and future feature development.

Modern Blog Platform – Full-Stack Content Management System

[Live Project](#) | [GitHub](#)

Tech Stack: Next.js (App Router), TypeScript, Prisma, PostgreSQL, Cloudinary, Tailwind CSS

- Built a feature-rich blogging ecosystem using Next.js Server Actions for a zero-API architecture, ensuring high performance and type safety.
- Integrated @uiw/react-md-editor for robust Markdown content creation and Cloudinary for optimized media management.
- Implemented end-to-end type safety using Zod for schema validation and Prisma ORM for efficient database interactions.

Education

Master of Computer Applications (MCA)

2024 – 2026

Chandigarh University
Relevant Coursework: Advanced Web Development, AI, Database Management Systems

Punjab, India

Bachelor of Computer Applications (BCA) – Computer Science

2020 – 2023

Kanpur Institute of Technology

Kanpur, UP, India