

# SANDEEP SINGH

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## Professional Summary

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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

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**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

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### ClassBuddy – AI-Powered Learning Management System Live Project | [GitHub](#)

*Tech Stack: React.js, FastAPI, LangChain, LangGraph, Redis, PostgreSQL, Inngest*

- Developed a full-stack AI-powered LMS supporting **2 user roles (Teachers & Students)** with group-based content sharing and subscription-based access control.
- Implemented agentic AI workflows using LangChain and LangGraph with Gemini API, reducing manual content creation by **40%**.
- Engineered a real-time chat system using FastAPI WebSockets and Redis Pub/Sub with persistent storage in PostgreSQL.
- Designed an event-driven architecture using Inngest for background AI processing and scheduled jobs.
- Integrated JWT authentication, role-based authorization, and Razorpay payment gateway for secure subscriptions.

### 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

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<b>Master of Computer Applications (MCA)</b> <i>Chandigarh University</i>	<b>2024 – 2026</b> <i>Punjab, India</i>
<b>Bachelor of Computer Applications (BCA) – Computer Science</b> <i>Kanpur Institute of Technology</i>	<b>2020 – 2023</b> <i>Kanpur, UP, India</i>