

Prakhar Dwivedi

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SUMMARY

Software engineering student skilled in building and launching web applications, including developing backend services, designing APIs, and integrating applications across different systems.

EDUCATION

IIT Bhopal

B.Tech, Electronics & Communication Engineering (GPA: CPI 8.55)

Sep 2023 - Jun 2027

- **Coursework:** DSA, OOP, DBMS, CN, Systems

EXPERIENCE

Brinavv Technologies | *Software Development Intern (MERN Stack)*

Jan 2026 - Present

- Onboarding into the MERN-based codebase and development workflows
- Reviewing existing frontend architecture and understanding component structure, API integrations, and data flow

IndiaPaathy | *Fullstack Developer (Freelance)*

Dec 2025 - Present

- Built frontend screens and reusable UI components using React and Next.js for an NGO-backed platform
- Integrated authenticated REST APIs and handled client-side data flow with focus on correctness and usability

PROJECTS

PanditAI | Live Site

2026

- Built and launched a full-stack AI application using **FastAPI** and **Next.js**, integrating astronomical computations, **knowledge-graph reasoning** (Neo4j), and LLM-based natural language generation
- Benchmarked production backend performance, observing **~5.4s cold-start latency and ~2.2s median warm-request latency**, with **~60% performance improvement** after cache warm-up
- Optimized Docker builds by removing GPU dependencies, **reducing backend image size by ~700MB** and improving deployment reliability on managed cloud infrastructure
- Validated frontend-backend API contracts using **Pydantic** and **TypeScript types**, enforcing strict schemas and preventing runtime integration errors across services

eVakeel | Live Site

2025

- Engineered a full-stack web application with a **React** frontend and **Node.js + Python (FastAPI)** backend, designing APIs and data flows to support complex document-based user interactions
- Implemented a production-grade legal document QA system over **~63 high-density legal chunks** (Acts), integrating InLegalBERT for semantic retrieval and achieving **~50ms warm-start query latency** under steady-state conditions.
- Containerized and operated the application using **Docker**; used **Redis** for caching and structured logging for observability
- Processed 10 document templates; reduced average **document-to-embedding time from 12s to 1.2s** (measured on 100 test docs), and cut median API response latency from **340ms to 190ms** after adding Redis caching

ACHIEVEMENTS

- Selected as a **Mentee** for The Magma Core project under the **Linux Open Source Foundation** alongside 137 others
- Achieved **12K rank among 262K** participants in Adobe India Hackathon 2025, placing in the **top 5% nationally**
- Ranked **1st** in the ECE department with a **9.32 SGPA** in Semester 3, demonstrating consistent academic excellence
- **Codeforces** : 1314(Pupil); **CodeChef**: 1614 (3); **LeetCode** : 1799; solved **400+ DSA problems** across platforms
- Directed 3+ peer sessions as Teaching Assistant for **Digital Logic Design**

ACADEMIC AND LEADERSHIP

XPLOIT Club, IIT Bhopal | *Offensive Security Lead*

Sep 2025 - Present

- Learning Offensive cyber security and fostering a culture of ethical hacking.
- Organized campus-wide CTF with **100+ participants**. Conducting weekly workshops on web exploitation and cryptography

SKILLS

- **Languages:** C, C++, Python, TypeScript, JavaScript, SQL
- **Frameworks & Libraries:** React, Next.js, Node.js, Fastify, Prisma, NextAuth.js, Tailwind CSS, Framer Motion
- **Databases:** PostgreSQL, MySQL, SQLite
- **Concepts:** Data Structures & Algorithms, REST APIs, Authentication, Database Design
- **Tools:** Git, GitHub, Docker, Linux (basics)