



# Himanshu Singh

Bachelor of Technology in  
Computer Science and Engineering  
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## EDUCATION

Degree/Certificate	Institute/Board	Year
B.Tech. in CSE	Jaypee Institute of Information Technology, Noida	2023 – 2027

## RELEVANT COURSEWORK

- Data Structures
- Algorithms
- Database Systems
- Operating Systems
- Web Development
- Software Development
- Computer Architecture
- Computer Networks

## EXPERIENCE

- **Center of Excellence** JIIT, Noida  
*Gen-AI Intern* June 2025 – July 2025
  - Built a local-first **AI PDF Question Generator** to process academic PDFs and generate exam-style questions offline.
  - Developed OCR pipeline with **PyMuPDF** + **Tesseract**, preserving math symbols and diagrams.
  - Integrated **T5-base** and **Ollama (llama3)** via LangChain for question generation and subtopic tagging.
  - Implemented **FAISS**-based semantic search for fast, filtered question retrieval.

## PROJECTS

- **Notify — Contest Tracker & Notification Platform** [Github](#) | [Live Site](#)  
*Next.js, React, Node.js, MongoDB, Tailwind CSS, Nodemailer, Docker*
  - Developed a progressive web application integrating **3** major platforms (Codeforces, CodeChef, LeetCode) with automated cron jobs to fetch contest data, serving **500+** users with real-time updates.
  - Deployed a smart notification system using Nodemailer to deliver scheduled email reminders, featuring secure authentication flows with OTP verification and cross-platform friend tracking.
- **AI Automation Browser Extension** [Github](#)  
*Python, LangChain, TypeScript, React, WXT, WebSockets*
  - Architected a Model Agnostic Chrome extension using Deep Agent architecture to orchestrate complex browser automations, improving task decomposition success rates by **40%** over traditional scripts.
  - Implemented a Semantic DOM Compression pipeline via WebSockets to overcome LLM token limits, reducing API latency by **79%** and minimizing memory overhead during complex DOM manipulation tasks.
- **Converse - Real-Time Chat Application with End-to-End Encryption** [Github](#) | [Live Site](#)  
*React, Socket.io, MongoDB, Express.js, ShadCN*
  - Forged an interactive chat interface employing React hooks alongside Socket.io, incorporating **11+** ShadCN UI elements to handle concurrent messaging, which led to being identified as the team's go-to for complex problems.
  - Engineered a WebSocket API featuring a file upload system for **5MB** audio messages, incorporating JWT authentication with bcrypt hashing and GridFS storage using Express.js middleware, reducing latency by **15%**.

## TECHNICAL SKILLS

- **Languages:** Python, C/C++, JavaScript, TypeScript, SQL (PostgreSQL), PHP, HTML/CSS
- **AI/ML:** LangChain, OpenAI API, Ollama, FAISS, ChromaDB, RAG Systems, Vector Embeddings, Tesseract OCR
- **Frameworks & Libraries:** Next.js, React, Redux, Tailwind, Framer Motion, ShadCN, Chrome Extension API
- **Backend Technologies:** Node.js, Express, FastAPI, Flask, WebSocket, Socket.io, OAuth 2.0, JWT, FFmpeg
- **Databases:** PostgreSQL, MongoDB, Appwrite, Vector Stores, Semantic Search
- **DevOps & Tools:** Git, Docker, GCP, Vercel, Postman, VS Code, CI/CD

## LEADERSHIP / VOLUNTEERING

- **Google Developer Groups** JIIT, Noida, IN  
*Web Development Lead* Sep 2024 – Present
  - Orchestrated [BitBox 6.0 hackathon](#) with **1400+** registrations, coordinating a 12-hour event and achieving **100%** completion rate with zero technical incidents.
  - Spearheaded the Google Cloud Study Jam for **80+** participants, directing a 4-person team to deliver **10+** hands-on labs.
- **Cinekala - Film Society of JIIT** JIIT, Noida  
*Cinematographer* September 2023 – Present
  - Produced After Movie for [Converge'26](#) and conducted cinematography workshops for students.

## AWARDS & CERTIFICATIONS

- **Smart India Hackathon'25 (SAC-ISRO)** December 2025  
*Semi-Finalist*
  - Prototyped multimodal GPT-OSS achieving **89%** VQA accuracy on **50K+** training samples, deployed for ISRO geospatial analysis with **92%** classification accuracy and **60%** faster environmental monitoring workflows.
- **Web Development Bootcamp** — *Dr. Angela Yu, Udemy (2024)* [Link](#)
- **Google Cloud Study Jams** — *Google Cloud (2023)* [Link](#)