

# RATINDERDEEP SINGH

Samana, Punjab

[9646140854](#) [Email](#) [LinkedIn](#) [GitHub](#) [LeetCode](#) [Portfolio](#)

## EDUCATION

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**Dr. BR Ambedkar National Institute of Technology, Jalandhar**  
*B.Tech - Electronics and VLSI (Expected 2027) - CGPA - 8.41/10*

**Aug 2023 – Present**  
*Jalandhar, India*

**Budha Dal Public School, Samana**  
*Non Medical - Percentage - 93.2%*

**Passing year: 2023**  
*Samana, India*

## EXPERIENCE

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### AI Developer Intern

**June 2025 – Jan 2026**

*Maitreyalabs*

- Prototyped multiple real-time, voice-driven AI systems end to end, including **RealTalk**, a voice-controlled AI avatar, owning design and implementation across backend, inference, and client.
- Built FastAPI backend services that unified speech-to-text, an LLM, and text-to-speech into a **single inference pipeline**, integrating multiple AI providers for low-latency, speech-driven responses.
- Integrated **on-device** TensorFlow Lite models on an Android client for intent classification and face/speaker detection, routing natural-language commands to actions over async REST APIs.

### Core Member

**Nov 2024 – Present**

*Google Developer Group on Campus*

- Led an AI agents session at Winterfest, teaching 60+ students and open-sourcing the session code.
- Organized two editions of NITJ's flagship hackathon, HackMol 6.0 and 7.0, coordinating 70+ and 100+ offline teams respectively.

## PROJECTS

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### PartyHost

[Live](#) | [Demo](#)

- Built a voice-first multiplayer trivia game (React 19, TypeScript, Zustand, Express, Firebase) hosted by a real-time AI avatar, and modeled the **30+ phase** game flow as a pure reducer for predictable, fully unit-testable state.
- Engineered a **four-tier text-to-speech cache** and layered echo suppression for low-latency, low-cost speech, plus in-browser computer vision (MediaPipe) attributing each spoken answer to the correct player within a **sub-100ms** budget.

### Satark.ai

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

- Built an AI-powered legal assistant for real-time case retrieval and analysis (React, FastAPI, LangChain, MongoDB, Groq) across five modules, cutting manual workload by **40%**.
- Designed a **Retrieval-Augmented Generation (RAG)** pipeline over legal corpora with multiple LLMs, served via FastAPI for document generation and knowledge retrieval.

## SKILLS

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**Languages:** Python, C++, JavaScript, TypeScript, SQL

**Development:** FastAPI, Node.js, Express, REST APIs, React, Next.js, HTML, CSS, MySQL, MongoDB

**AI/ML:** LangChain, TensorFlow, NumPy, Pandas, scikit-learn, Hugging Face

**Developer Tools:** VS Code, Jupyter Notebook, Git, GitHub, Postman, AWS, Docker, Linux

**Core CS:** DSA, OOP, DBMS, Operating Systems, Computer Networks, System Design, COA

## ACHIEVEMENTS AND LEADERSHIP ROLES

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- Winner - **Best on Groq** track, **Code Kshetra 2.0** (150+ teams)
- 2nd Runner-up - **Hackmol 5.0**, GDSC NITJ
- Completed **Google Cloud GenAI Study Jams (2024)**
- **AI Pathfinder** - OpenLearn Initiative
- Core Member - Zeal Society, NITJ