

RATINDERDEEP SINGH

Samana, Punjab

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EDUCATION

Dr. BR Ambedkar National Institute of Technology, Jalandhar

B.Tech - Electronics and VLSI (Expected 2027) - CGPA - 8.36/10

Aug 2023 – Present

Jalandhar, India

Budha Dal Public School, Samana

Non Medical - Percentage - 93.2%

Passing year: 2023

Samana, India

EXPERIENCE

AI Developer Intern

June 2025 – June 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** machine learning 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

PartyHost

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

- Built a voice-first multiplayer trivia game (React 19, TypeScript, Zustand, Express, Firebase) hosted by a real-time AI avatar, modeling the **30+ phase** game flow as a **finite-state machine** via a pure reducer for predictable, fully unit-testable transitions.
- Engineered a **tiered caching layer** for text-to-speech output and layered echo suppression to cut speech latency and cost, 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 case retrieval and analysis (React, FastAPI, LangChain, MongoDB, Groq), organized into five modules spanning case search, summarization, and document generation.
- Designed a **Retrieval-Augmented Generation (RAG)** pipeline over legal corpora with multiple LLMs, served via FastAPI for document generation and knowledge retrieval.

SKILLS

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

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

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

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

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

ACHIEVEMENTS AND LEADERSHIP ROLES

- 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