

# Saransh Halwai

Roll No.:240001066

B.Tech - Computer Science Engineering

Minor in Liberal Arts

Indian Institute Of Technology Indore

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## EDUCATION

| Degree/Certificate | Institute/Board                       | CGPA/Percentage | Year         |
|--------------------|---------------------------------------|-----------------|--------------|
| B.Tech. Major      | Indian Institute of Technology Indore | 8.25 (Current)  | 2024-Present |
| Senior Secondary   | CBSE Board                            | 96.2%           | 2024         |
| Secondary          | ICSE Board                            | 97.2%           | 2022         |

## PROJECTS

### • IITIBOT

*IITISOC, IIT Indore*

*May 2025 - Jul 2025*

*GitHub*

- Made an online chatbot able to answer complex queries about the IITI campus
- Comprised a RAG pipeline connected to an extensive multi-agentic system
- Complete with a frontend and deployed by dockerising and hosted on Vercel and Render
- Project awarded Bronze medal in AI/ML domain

### • API for Financial Analysis

*Independent Project*

*Jul 2025*

*GitHub*

- Built a FastAPI backend with JWT auth, PostgreSQL, and Redis caching.
- Created endpoints for user auth and financial indicators (SMA, EMA, MACD, etc.).
- Implemented rate limiting and tiered access using Redis.
- Used modular structure with Pydantic, OAuth2, and clean separation of concerns.

### • Hallucination Detection in LLMs

*Prof. M. Tanveer, Department of Mathematics, IIT Indore*

*May 2025 - Present*

- Working on implementing new techniques to detect hallucinations in LLMs
- Studied various Research Papers on Deepseek-R1 and fine-tuning as part of the project

## TECHNICAL SKILLS

- **Programming Languages:** Python, C/C++, JavaScript, TypeScript, Java\*
- **Machine Learning & AI:** PyTorch, scikit-learn, Keras, TensorFlow, LangChain, Pathway, Hugging Face Transformers, FAISS, Groq API, MCP
- **Backend Development & DevOps:** FastAPI, Node.js, PostgreSQL, MySQL, Redis, Docker, OAuth2, JWT, RESTful APIs
- **Frontend Development:** React, Vite, Tailwind CSS, shadcn/ui, Leaflet.js
- **Data Science & Visualization:** pandas, NumPy, polars\*, matplotlib, seaborn
- **Tools & Ecosystem:** Git, GitHub, Linux, Streamlit, Gradio, Jupyter, uv
- **Operating Systems:** Linux, Windows

\* Elementary proficiency

## KEY COURSES TAKEN

- **Mathematics:** Linear Algebra, Calculus 1 & 2, Differential Equations 1 & 2, Complex Analysis, Discrete Mathematical Structures
- **Computer Science:** Computer Programming, Data Structures and Algorithms, Database and Information Systems, Mathematics in AI/ML, Logic Design

## POSITIONS OF RESPONSIBILITY

- **Coordinator, CSESA, IIT Indore** *Apr. 2025 - Present*
- **Member, Cynaptics Club, IIT Indore** *Feb. 2025 - present*
- **Content Lead, GDG IIT Indore** *Feb. 2025 - Present*

## ACHIEVEMENTS

- **2nd Runners up, IITISoC, IIT Indore** *2025*
- **AIR 1330, JEE Advanced** *2024*
- **AIR 2988, JEE Mains** *2024*
- **Runners up, Word wars, DebSoc, IIT Indore** *2025*