



**Chetan Arora**  
Bachelor of Technology  
Computer Science and Engineering  
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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech., CSE	Indian Institute of Technology, Bhilai	8.96	2022-present
Senior Secondary	Central Board of Secondary Education	94.2%	2022

EXPERIENCE

**RECOGX**[Certificate],[📄] April 2024 - May 2024  
*React Native application development intern* Remote

- Developed a cashless smart card system, serving **10,000+ students** across various institutions in India.
- Implemented the backend using the **MERN stack** and created a user-friendly mobile app with **React Native**.

FELLOWSHIP

**Smart Attendance System** Jan 2025 - present  
*TIH Fellow, IIT Bhilai*

- Building a biometric smart attendance system using **RetinaFace** for face detection and **FaceNet** for face recognition, integrated with **RFID** technology (ISO/IEC 14443) for **secure authentication**
- Implemented on the **MERN** stack, the system **automates attendance marking, saving 100% of classroom time** spent on manual attendance
- Authored a review paper on face detection and verification techniques submitted to **ICCV 2025**

ACHIEVEMENTS

**Competitive Programming and problem solving**  
*As an enthusiast in Algorithms I have solved 1000+ DSA questins and participated in over 30+ contests.*

- Specialist @ codeforces (max rating 1456) [Codeforces](#), Leetcode profile - [Leetcode](#)
- Secured 4th position in Intra-College Trustathon hackathon based on CDAC device **TrusToken** - [Github](#)

PROJECTS

**Manim Gen - Google Hack2skill hackathon** March 2025-present  
*Flask, Agentic AI, LLMs, AWS* [🔗]

- Engineered a **agentic RAG** based pipeline that converts YouTube lectures into interactive Manim-rendered animations using Gemini-based content extraction and LaTeX generation.
- Designed an LLM-driven architecture with a **Planner Agent** for **semantic chunking**. and **keypoint extraction**
- Implemented a **Codegen Agent** for dynamic scene generation using Manim

**ML Project - Metro Line Prediction System** October 2024 - November 2024  
*Flask, Pytorch, Graph Neural Networks* [🔗]

- Developed a machine learning model and a software to predict the **optimal metro line** for public based on factors like **location, suburb, district and population** collected from OpenStreetMap and overpy
- Preprocessed and analyzed large datasets consisting of districts, population achieving **91% prediction accuracy** using the **Graph convolution model** on our custom created city graphs

SKILLS

**Programming Languages:** : C,C++,Python,Java,Shell Script,Javascript,PHP,Typescript  
**Technologies:** : NodeJS, React, React Native, Pytorch ,MongoDB, PostgreSQL, Langchain, Agentic AI  
**Tools:** : Git, Docker, LaTeX, Arduino IDE,Gurobi,Adobe Illustrator, Figma,

KEY COURSES TAKEN

**Computer Science and maths:** Algorithm & Data Structure, Operating System, DBMS, Probability and statistics, Linear Algebra, Calculus, Discrete Math , Computer Networks, Cryptography, Nand2Tetris , Machine Learning, Principles of Programming Languages, Theory of computation, Compiler Design , Computer Organisation and Architecture, DIP, Quantum Computing, Graph Theory, Network Science

POSITIONS OF RESPONSIBILITY

**Contingent Lead**,Inter IIT Tech Meet 2024, IIT Bhilai Oct 2024 - Dec 2024