



## EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	B.TECH	IIT Kharagpur	7.87 / 10
2021	AISSCE	Chinmaya Vidyalaya, Bokaro Steel City	97.6%
2019	AISSE	Chinmaya Vidyalaya, Bokaro Steel City	97.4%

## PROJECTS

## Movie Recommendation System | Hackathon

Dec 2023

- Successfully implemented various types of recommendation systems, offering suggestions based on the provided input type.
- Accomplished **0.9 RMSE and 0.7 MAE** through the **Collaborative Filtering Algorithm** using the Python Surprise library.
- Devised a user-friendly GUI using the **Tkinter Library**, seamlessly integrating it with the movie recommendation system.

## Search Engine | Hackathon

May 2023 - June 2023

- Developed a **cross-platform** search engine for coding questions. **Scraped questions** from different coding platforms like CodeChef, LeetCode, and Codeforces, and then built a search engine using the **TF-IDF algorithm** for reliable output.
- Finally, established a fundamental server in Python using the **Flask module**, facilitating users by delivering comprehensive information such as difficulty level, score, and links to questions available on various platforms based on their specific queries.

## Car Speed Detector using Infrared Sensors

Mar 2022 - April 2022

- Collaboratively developed a model displaying the speed of objects passing a car speed detector. It employs the basic speed calculation formula using time and distance between **infrared sensors**. Language: C++.
- Utilized **TinkerCAD** to design and build the product model, incorporating Arduino UNO, infrared sensors, and an **LCD display**, among other components.

## COMPETITION/CONFERENCE

## AtVision | Nomination for Smart India Hackathon

Mar 2023

- Developed an innovative touch-free attendance system, eliminating paper-based methods and championing sustainability. The system incorporates a machine learning model and an ultrasonic distance sensor, improving detection accuracy.
- This attendance system is not only secure and adaptable but also poses a challenge to spoofing attempts, ensuring reliability.

## ROBOSUMO | Team participation

Oct 2022

- Engineered a robust and swift-moving bot with the capability to push the opponent out of the arena in a sumo match.
- The lightweight and meticulously designed robot demonstrated remarkable robustness. It featured precise wiring, incorporating a double-pole-double-throw switch for enhanced control and maneuverability.

## SKILLS AND EXPERTISE

**Programming Languages:** *Proficient:* C++ | C *Familiar:* Python | HTML | CSS | JavaScript**Libraries/Frameworks:** C++ STL | NumPy | Pandas | Matplotlib | Scikit-learn**Software/Tools:** Visual Studio | VS code | Jupyter Notebook | Git | Pycharm | TinkerCAD | Arduino IDE | FreeCAD**Coursework:** Programming and Data Structures | Linear Algebra and Numerical Analysis | Advanced and Transform Calculus | Summer Analytics, IIT Guwahati | Machine learning specialization by Andrew Ng | Winter consulting, IIT Guwahati

## AWARDS AND ACHIEVEMENTS

- **Joint Entrance Examination(Main) 2021** : Secured an All India Rank of **1344** in JEE Mains 2021, out of 12 lakh students.
- **Joint Entrance Examination(Advanced) 2021** : Under **top 2.7%** among more than 1.5 lakh students from all over India.
- **VITEEE(Vellore Institute Entrance Test) 2021**: Secured an All India Rank of **40** in VITEEE, out of 2 lakh students.

## POSITIONS OF RESPONSIBILITY

## Breakfree, Technology Dance Society, IIT Kharagpur

Dec 2021 - Present

- Currently serving as the **Governor** of the official All-Style Dance Crew of IIT Kharagpur, recognized as an official part of Technology Students' Gymkhana. Overseeing a team of around **90 members**, managing the budget, coordinating performances and ensuring the society's overall functioning.

## Secretary Social and Cultural, Lal Bahadur Shastri Hall

Aug 2022 - April 2023

- Held the position of Secretary for social and cultural activities during the 2022-23 academic session, effectively coordinating and overseeing the **Diwali Illumination** event with the active participation of 200+ boarders. Additionally, managed the meticulous selection process for various events for the Hall team.

## EXTRA CURRICULAR ACTIVITIES

- Secured 4th position in Group Dance event of Inter IIT cultural meet 5.0 and 8th position in Inter IIT cultural meet 6.0 out of 21 teams.
- Team Member at KodeinKGP, a prominent IIT Kharagpur society. Led the development of a website with a variety of programming and data structures questions and C language solutions, aiding first-year students in their courses.
- Junior Executive Member of Gopali Youth Welfare Society, worked in the Sponsorship and Reform and innovation in school education team.
- Volunteered in National Social Service, IIT Kharagpur as **Group Leader** for the session 2022-23.