

# Dhruv Agrawal

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🔗 <https://github.com/Dhruv460>



## Education

### Indian Institute of Technology (ISM) Dhanbad

Expected May 2027

Bachelor of Technology in Computer Science and Engineering (GPA: 8.94 / 10.00)

Dhanbad, Jharkhand

- **Professional Summary:** I am a Computer Science student with a deep interest in web development, competitive programming, and algorithm development. With hands-on experience in building dynamic web applications and user-centric interfaces, I thrive on solving real-world problems. I continuously seek to improve through project-based learning and participation in competitions. My approach is rooted in learning from every experience and sharing that knowledge with others.

## Experience

### Cyberlabs, Web Development Division

Dec 2023 – Present

Web Developer Member

IIT (ISM) Dhanbad, Jharkhand

- Gained hands-on experience by working as a team member on various interdivision projects, collaborating with fellow Cyberlabs members on real-world web development challenges and enhancing technical proficiency in frontend and backend technologies.

### Internal Hackathon for Smart India Hackathon

Aug 2024

Web Developer - AI-powered Bot Detection System

IIT (ISM) Dhanbad, Jharkhand

- Contributed as a web developer to build an AI-powered bot detection system, implementing real-time monitoring of user interactions and data transmission.
- Developed the frontend and integrated with a Flask-based backend, ensuring seamless data flow for machine learning analysis.
- Collaborated with the ML team to integrate a CNN model for classifying user behavior, playing a key role in building the system's bot detection capabilities.

## Projects

### Study Hub | Cyberlabs Recruitment, Winter of Code – Dec 2023 | HTML, CSS, JavaScript, Firebase

- Developed a web platform that fosters academic excellence by enabling students to connect, ask questions, and share knowledge.
- Key features include a community-driven Q&A system, a repository of study materials, and an easy-to-use interface for uploading and accessing study resources.
- Implemented key functionalities to enhance user engagement and collaboration in a seamless learning environment.
- View the project on GitHub: <https://github.com/Dhruv460/studyHub>

### Bot Proof - Intelligent Bot Detection System | React.js, Flask, MongoDB, Node.js, Express.js, Socket.io

- Contributed as a web developer to build an AI-powered bot detection system that monitors user interactions and mouse movements.
- Implemented real-time data transmission from the frontend to the backend via WebSocket, allowing continuous user monitoring.
- Collaborated with a team to develop Bot Proof, an AI-powered system that detects and blocks bot activities on web platforms.
- Designed and implemented the frontend using modern web technologies to track user interactions and mouse movements in real-time.
- Developed API endpoints to ensure seamless data transmission from the frontend to the backend for analysis.
- Integrated a Flask-based backend to preprocess the collected data and prepare it for the machine learning model.
- Worked closely with the machine learning team to connect a Convolutional Neural Network (CNN) model that classifies user behavior.
- built a feature that interprets the ML model's predictions, determining whether to allow or block the user.
- View the project on GitHub: [https://github.com/Dhruv460/sih\\_bot](https://github.com/Dhruv460/sih_bot)

### **Project Collab - Collaborative Platform for Innovators (In Progress) | MERN Stack, OpenAI API, Socket.io**

- Collaborated on a web platform enabling users to share ideas and collaborate on projects, providing a creative space for professionals.
- Designed and implemented a real-time communication feature using Socket.io to enhance collaboration between users.
- Integrated OpenAI API for advanced task suggestions and collaboration support, improving project matching efficiency.
- Building features for users to share ideas, network, and collaborate on innovative solutions.
- Implementing project management tools and a community engagement system to facilitate seamless teamwork.
- Focused on creating a space for entrepreneurs, developers, and designers to bring ideas to life.
- View the project on GitHub: <https://github.com/Dhruv460/project-collab->

### **Technical Skills**

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**Languages:** C, C++, JavaScript, HTML, CSS

**Technologies:** MERN Stack (MongoDB, Express.js, React.js, Node.js), Flask

**Concepts:** Data Structures and Algorithms, API Development, Web Development, Database Management