

Ayush Sharma

Indian Institute of Technology, Goa

3rd Year Undergraduate, Mathematics and Computing

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Education

B.Tech, Mathematics and Computing, IIT Goa,

2023 – Present

Experience

Software Development Intern [Supervisor:- Dr. Rahul CS]

May 2025 – Present

- Role:** Backend developer for ERP modules (consultation, referral, evaluation).
- Tasks:** Designed and integrated RESTful APIs using Express.js and MongoDB, refactored backend logic for form submissions, student updates, and admin approval workflows. Collaborated with frontend team to ensure smooth integration.
- Accomplishments:** Optimized database queries and API response handling, reducing average fetch times by **25%**. Enhanced data consistency through validation and middleware checks, lowering bug frequency in record updates by **30%**.

Projects

Alumni Management System [[GitHub](#)] [[Demo](#)]

March 2025 – Apr 2025

- Situation/Task:** Students often lacked visibility into placement statistics and alumni career paths so to bridge this gap, I developed a platform to centralize alumni data, placement information, and student profiles.
- Action:** Built a MERN stack portal with JWT authentication, role-based access, and admin-controlled profile update workflows. Designed dashboards with advanced filtering (CGPA, branch, batch, placement stats).
- Accomplishments:** Improved placement data retrieval and filtering efficiency by **40%** through optimized queries and indexed fields. Enhanced accessibility for 100+ potential users (students, admins).
- Tech Stack:** React.js, Node.js, Express.js, MongoDB, JWT

Fraud Detection System [[GitHub](#)] [[Demo](#)]

Oct 2024

- Situation/Task:** Goa Police Hackathon required a system to detect and flag fraudulent websites in real time.
- Action:** Developed AI-powered MERN app with SSL validation, domain age checks, phishing keyword detection, and Google Gemini AI scoring.
- Accomplishments:** Reached **85%+ fraud detection accuracy** in testing datasets. Project ranked in top 32 out of 100+ hackathon teams.
- Tech Stack:** Python, Flask, MongoDB, Gemini API, Beautiful Soup

Secure Interview System (In Progress)

May 2025 – Present

- Situation/Task:** Increasing AI-assisted cheating in online interviews highlighted the need for a secure coding environment.
- Action:** Building a Windows-based system with kiosk mode, shortcut blocking, process monitoring, and API request filtering. Designed screen-freeze mechanism on focus loss to prevent unauthorized multitasking.
- Accomplishments:** Currently in building phase; expected to reduce chances of cheating by **>80%** compared to normal platforms.
- Tech Stack:** C++, Windows APIs, System-level Monitoring

Skills

Programming Languages: C++, Python, JavaScript

Web Development Technologies: HTML, CSS, React.js, Node.js, Express.js, MongoDB, REST APIs

Tools & Frameworks: Git, Linux, Flask, BeautifulSoup, Requests, JWT, Postman, Vercel, Render

Coursework: Algorithm Design, Data Structures, Software Tools, OS Internals, Compilers, Cache Design

Achievements & Extracurricular

- Secured top 32 position among 100+ teams at Goa Police Hackathon 2024 with a Fraud Detection System achieving 85%+ accuracy.
- Achieved LeetCode rating of 1750+ (top 8% globally), demonstrating problem-solving and DSA proficiency.
- Selected for Inter-IIT Basketball Championship, representing IIT Goa.