SANYAM JAIN

ACADEMIC PROFILE

Degree/Certificate	Institution	Percentage/CGPA	Year
IDD	Mathematical Sciences IIT (BHU), Varanasi	9.40	2027
CISCE (XII)	The Modern School	92.40	2021
CISCE (X)	The Modern School	97.20	2019

SKILLS

- **Languages**: C++, SQL, Python
- **Web Development**: JavaScript (ES6+), Node.js, Express.js, PostgreSQL, RESTful APIs, Bootstrap 5, Git, React
- **ML Libraries**: TensorFlow, Keras, NumPy, Pandas, Scikit-learn

PROJECTS

Multi-User Book Notes Management System with AI Integration

Full-stack web app with authentication, database, API integration, and agentic AI workflows

- Designed and developed a full-stack multi-user web app using **Node.js**, **Express.js**, **PostgreSQL**, and **EJS**, following a modular MVC architecture; implemented secure **authentication** with bcrypt and session-based login
- Utilized the **OpenLibrary REST API** for dynamic book metadata and cover image retrieval; integrated intelligent content suggestions based on retrieved data
- Integrated **Google Gemini AI** for multi-step workflows including **personalized recommendations**, **genre analysis**, and **book Q&A** features; enhanced interaction through conversational and context-aware functionality

Image Compression using PCA and Autoencoders

Undergraduate project

- Implemented image compression using **PCA**, **simple neural networks**, and **CNN autoencoders** on both **grayscale and colored images** using **Python**, **TensorFlow**, **OpenCV**, and **Matplotlib**
- Analyzed and compared methods using **compression ratio**, **MSE**, and reconstruction quality to evaluate their trade-offs, strengths, and limitations

Operating System Process Scheduler Simulator

CPU scheduling simulator using C++ and OOP principles

- Built a CPU scheduling simulator in **C++**, implementing **FCFS**, **SJF**, **Priority**, **Round Robin**, **MLQ**, and **MLFQ**, with both **preemptive and non-preemptive** variants using modular OOP design
- Simulated **context switch overhead**, visualized execution with **Gantt charts**, and computed key metrics (**turnaround**, **waiting**, **response times**) to evaluate scheduling efficiency

POSITION OF RESPONSIBILITY

Joint Secretary – Events Team, MACS Society

- Led the organization of **Numerator vs Denominator**, the flagship **intra-departmental mathematics competition**, ensuring smooth conduct and active participation
- Directed **MACS Sports Week**, managing **logistics, scheduling, and team coordination** to deliver a successful multi-event sports initiative
- **Core Team Member** for **CodeMat** – a globally accessible, **rated contest** hosted on **CodeChef**; contributed to problem setting, testing, and coordination with CodeChef's technical team

Public Relations Executive – FMC Weekend 2024

- Collaborated with the PR team to invite VIPs and chief guests for fest events
- Served as primary point of contact, ensuring smooth communication and coordination throughout the event

HONOURS AND ACHIEVEMENTS

Competitive Programming

- **Expert** on [Codeforces](https://codeforces.com) (handle: *madao*), Max Rating: *1713*, **Global Ranks** – 417 (Round 1006)
- **5-Star** on [CodeChef](https://codechef.com) (handle: **sanyamjain353**), Max Rating: *2004*, **Global Ranks** – 60 (Starter 188), 63 (Starter 165)

Competitions

- Secured **3rd position** in the Case Study competition at **National Students' Space Challenge (NSSC)**, organized by *IIT Kharagpur*

T: 8176971271 **E:** sanyamjain353@gmail.com **Address:** 486/6A, Babbu Wali Gali, Dali Ganj, Lucknow