

# Manab Bairagi

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## SUMMARY

Motivated Computer Science and Engineering undergraduate with 8.0 CGPA and proven experience in deep learning, machine learning, cloud storage solutions, and backend development. Passionate about building scalable, highly available systems with expertise in C++, Python. Demonstrated leadership in cross-functional teams and hands-on experience in infrastructure development, API design, and performance optimization for cloud-based applications.

## EXPERIENCE

### Software Engineering Project, University of Calcutta

2022 – Present

- Led a 4-member development team to build a distributed system for exam scheduling, registration, and results management.
- Implemented user authentication, authorization, and role-based access control.
- Ensured high availability and fault tolerance through error handling and system redundancy.

### ISRO Hackathon – Participant

2025

Cleared Round 1 with innovative solutions for space technology challenges. [View Certificate](#)

## PROJECTS

### University Examination Management System (MERN Stack)

Led a 4-member team to build a system for exam scheduling, registration & results. Integrated user authentication & dashboards.

### AI Mock Interview System (Next.js, Gemini API, Vapi)

[\[Edith-Live Link\]](#)

Developed an AI-powered mock interviewer with real-time interaction and voice feedback.

### Super Resolution Deep Learning Model

Built a deep learning model to upscale dual low-resolution satellite images for a hackathon organized by ISRO. This project further being used for identification of land and fratures for monetrting vegetation.

### Glacial lake and glacier detection using Deep Learning

Created a custom deep learning model with custom loss function and techniques to identify and classify unbalanced satellite image data to predict the glacial lake and predict glacial lake floods. Also for sustainable development near glacier and vulnerable regions.

## DL Studio

DL Studio is a powerful, interactive platform designed to democratize deep learning education and research. It empowers students, researchers, and developers to visually build, analyze, and export deep learning models without getting lost in boilerplate code.

## EDUCATION

2022 – 2026 **University of Calcutta**, B.Tech in Computer Science and Engineering CGPA: 8.0 (GATE 2025 Qualified)  
2022 **Army Public School, Barrackpore** – Higher Secondary (Class 12, CBSE) 94.6%

## SKILLS

Programming Languages	C, C++, Python, JavaScript
Backend & Infrastructure	Node.js, Express.js, Flask, RESTful APIs, System Design
Cloud & Distributed Systems	Docker, Microservices, API Gateway, Caching Systems
Deep Learning Frameworks	PyTorch, Keras
Data Processing & Analytics	scikit-learn, pandas, NumPy, Data Pipeline Optimization
Databases & Storage	MongoDB, MySQL, Query Optimization
Development Tools	Git, GitHub, VS Code, Postman
Core Competencies	Distributed Systems Design, Performance Optimization, System Monitoring, Infrastructure Automation

## KEY STRENGTHS

- Performance Optimization: Proven track record in optimizing system performance and efficiency
- Team Leadership: Successfully led multiple cross-functional development teams
- Problem-Solving: Strong analytical skills with focus on reliability and fault tolerance
- Continuous Learning: Proactive in adopting new technologies and improving system capabilities