# Samyak Jain

International Institute of Information Technology, Bangalore

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### Education

## International Institute of Information Technology, Bangalore

Oct 22 - Jul 27

Integrated M. Tech (B. Tech + M. Tech) in Computer Science and Engineering

## Experience

# ML & AI Intern, IIIT Hyderabad

May 2025 - Jun 2025

- Curated AI-driven disaster management system estimating real-time building occupancy from proxy data.
- Processed 10K+ mobility logs, engineered temporal features, and trained ML models (RF, XGBoost) with 85%+
  accuracy.
- Accelerated iterations using AI tools for debugging/experimentation; ensured reliability via Git/GitHub.

# **Projects**

Multimodal Visual Question Answering | PyTorch, LoRA, Pandas, Google AI Studio API Apr 2025 - May 2025

- Curated and preprocessed a **64K+ VQA dataset** (Amazon Berkeley Objects) using **Google AI Studio API calls** for robust annotation; benchmarked transformer models (**BLIP**, **ViLT**) with **BERTScore**, **BLEU**.
- Fine-tuned baselines with LoRA, achieving 96.87% BERTScore while enabling parameter-efficient training for scalable deployment.

CODE-TOG (Real-Time Collaborative Editor) | React, Node.js, WebSocket, Heroku

Jul 2024 - Oct 2024

- Developed a full-stack platform with React frontend and Node.js/Express backend, enabling real-time collaborative coding with syntax highlighting and multi-language support.
- Integrated WebSocket (Pusher) for sub-100ms live sync across 50+ users; made scalable backend room/session management with MongoDB.
- Deployed on **Heroku with CI/CD**, ensuring fault-tolerant performance and production-ready reliability.

RealTimeObjectDetection | Python, TensorFlow, React, JavaScript, CSS

Apr 2023 – Jun 2023

- Built a real-time object detection platform with 85% accuracy and sub-200ms latency, identifying people and mobile devices for surveillance use cases.
- Integrated **TensorFlow backend** with a React frontend to deliver live webcam-based monitoring and scalable real-time inference.

LibSync - Library Management System | C, TCP, POSIX, File Handling, CUnit

Jan 2023 – Mar 2023

- Engineered a scalable client-server backend in C using TCP sockets and POSIX threads, supporting 50+ concurrent users with minimal latency.
- Enhanced robustness with 100% CUnit test coverage, preventing 20+ potential runtime crashes during QA.

# Technical Skills

- Programming Languages: Python (Libraries: TensorFlow, PyTorch, NumPy, Pandas), C++, Java, MySQL.
- Operating Systems: Proficient in Linux (Ubuntu, Debian, Arch).
- Systems & Tools: Linux, Git, Heroku, Bash, Pusher, QGIS, Google Earth Engine, MatLab, Ipconfig, IpScanner, .
- Web Development: React, Node.js, Android Development.

#### Relevant Coursework

- Data Structures and Algorithms.
- Software Engineering.
- Large-Scale Systems Design.

- Operating Systems.
- Information Retrieval.
- OOPS.

• Machine Learning.

• Computer Network (TCP/IP).

# Leadership / Extracurricular

#### Marketing Lead, TEDx IIIT Bangalore

Present

- Led a **team of 5** to design and execute campaigns, boosting event attendance by **40%**.
- Secured 17+ sponsors (ICICI, PNB, Mphasis) through partnerships and data-driven outreach.
- Scaled TEDx's digital presence by tailoring campaigns to audience behavior across platforms.

# SPOC (Student Point of Contact), Annual Sports Fest

2023

- Coordinated between participants, organizers, and faculty to ensure smooth execution of 20+ events.
- Managed logistics and scheduling for 500+ attendees, streamlining registrations and resource allocation.