

Sparsh Sinha

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Education

Indian Institute of Information Technology, Lucknow - India

August 2023 - June 2027

Bachelor of Technology in Computer Science and Business

GPA:8.8

Object-Oriented Programming, Data Structures and Algorithms, Operating Systems, Database Management Systems, Software Engineering.

Projects

Chat Application

- **Developed a real-time chat application** with user authentication, instant messaging, scalable backend and multimedia sharing using WebSockets for low-latency communication.
- **Deployed the application** on **AWS/GCP** with CI/CD pipelines for automated testing and updates.
- **Tech Stack:** React/Next.js, FastAPI/Node.js, WebSockets, MongoDB/PostgreSQL, OAuth2/JWT

Soccer Player Re-identification and Tracking System

- **Developed a real-time system to track and re-identify soccer players** even when they exit and re-enter the frame, enabling persistent ID assignment across complex match scenarios.
- **Fine-tuned YOLOv11 for player detection** and combined it with **Kalman Filter-based motion prediction** to maintain ID consistency during occlusions and fast movements.
- **Incorporated OCR-based jersey number extraction, color histogram comparison, and spatial cues** into a multi-feature matching pipeline to achieve **75.3% re-identification accuracy** and **18 FPS on 480p input**.
- **Tech Stack:** Python, OpenCV, YOLOv11, Kalman Filter, Tesseract OCR, NumPy, scikit-learn

Meeting Insights & Follow-Up Automation Agent

- **Built an AI-powered assistant using Streamlit** that automates the entire post-meeting workflow including transcription, summarization, task extraction, and calendar scheduling improving the productivity by **40%**.
- **Integrated OpenAI Whisper and GPT-4o (via Azure)** to transcribe audio and generate structured meeting summaries with clear action items including task, assignee, and deadline.
- **Implemented Google Calendar API integration** to automatically schedule extracted action items with due dates, descriptions, and times, streamlining follow-ups and task management.
- **Tech Stack:** Python, Streamlit, OpenAI Whisper, Azure GPT-4o, Google Calendar API, dateparser, dotenv

Skills

Languages: C, C++, SQL, HTML, JavaScript, TypeScript, Python, R

Technologies: Streamlit, Anaconda, Git, Azure, GCP, AWS, Linux, Google AI Studio, Kafka, MATLAB, Docker, Tableau, SAS

Frameworks & Libraries: Next.js, React, Node.js, Tensorflow, Keras, Scikit-Learn, PyTorch, sklearn, Tailwind CSS, MongoDB

Achievements

- **Google Cloud Agentic AI Hackathon**
Among the top **finalists** out of **9,000+ teams**, recognized for building an innovative AI-driven solution leveraging **Google Cloud services**.
- **Adobe India Hackathon**
Selected among the **top 1% (100,000+ participants)** to advance to Round 2.
- **AlgoUniversity Technological Fellowship (Stage 2 Qualifier)**
Selected for the second stage of this competitive fellowship, recognized for strong problem solving and algorithmic skills. Among the highest **7%** of the participants.
- **Naukri Campus Young Turks Challenge (Rank 5541 / 600,000)**
- **Hack-O-Calypse Runner Up**
Participated in a Coding Hackathon conducted by IIT Jammu and secured **2nd** place among 400+ participants
- **Meta Hacker Cup (Rank 5148 / 30,000+)**
Ranked among the top 17% in this prestigious global coding competition hosted by **Meta**.
- Rated **3* (1737)** on CodeChef, Ranked **38, 179, 395** in CodeChef Starters 164, 159, 160., Rated **Pupil(1369)** on Codeforces

Leadership and Volunteering

Entrepreneurship Cell, IIIT Lucknow

August 2023 - Present

Core Committee Member | Relations, Outreach & Initiators Team

- Organized E-Summit 2025, catering to **40,000+** participants in events like Startup Expo and networking sessions.
- Led sponsor outreach, securing monetary sponsorship of around **1 lakhs** and strategic partnerships.
- Managed **100+** startups, investors, and industry leaders, ensuring seamless event execution.