

# SARTHAK JAIN

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## Education

- **Guru Gobind Singh Indraprastha University, New Delhi, India** **2021-2025**  
*BTech in Computer Science Engineering* *CGPA: 8.5/10*
- **DL DAV Model School, Shalimar Bagh New Delhi, India** **2019-2021**  
*AISSCE (Class XII)* *Percentage: 91.1/100*
- **Delhi Public School, Sonapat, Haryana, India** **2007-2019**  
*AISSCE (Class X)* *Percentage: 94/100*

## Technical Skills

C/C++, Python, Java, HTML, CSS, Bootstrap, NodeJS, React, Flutter, Dart, OpenCV, TensorFlow, OCR, AWS, MySQL  
Machine Learning, Natural Language Processing (NLP), PyTorch, Github, Git, Wordpress, Arduino, Raspberry Pi

## Experience

- **Indrprastha Institute of Information Technology, Delhi** **November 2023 (Present)**  
*Reserach Assistant* *New Delhi, India*  
Working on speech forensic using deep learning and machine learning
- **Indian Institute of Technology, Ropar** **September 2023 (Present)**  
*Reserach Assistant* *Ropar, Punjab, India*  
Working on BLE-based Power Efficient Design using accelerometer for Cow Health Monitoring System.
- **Indian Institute of Technology, Ropar (iHub-AWaDH)** **June 2023 (Present)**  
*Software Development Intern* *Ropar, Punjab, India*  
Working on applying various algorithms and ML models to make accurate activity predictions and in the front end development of the Android APP, website for a end user interface.
- **Hello World Technologies** **June 2023 - Aug 2023**  
*Software Development Intern* *Bangalore (Remote)*  
Worked on website development using full stack web development
- **Saint Louis University, USA** **May 2023 - June 2023**  
*Data Visualisation Intern* *USA(Remote)*
- **Saint Louis University, USA** **May 2023 - June 2023**  
*Project Management Intern* *USA(Remote)*
- **NbliK** **Sept 2022 - Dec 2022**  
*Community Manager Intern* *Remote*
- **Hamari Pahachan NGO (HPNGO)** **Nov 2022 - Dec 2022**  
*Digital Marketing Intern* *Remote*

## Projects

- **Cow Health Monitoring System** [Git](#) **June 2023 (Present)**
  - Guided by Dr.Suman Kumar (Prof. IIT Ropar), developed a Real-Time Cow Activity Monitoring System for analysing cow's health.
  - Employed technologies: ML, AWS (cloud), Flutter, Dart, Python, Lambda. Hardware: accelerometer, NRF5340DK BLE PCB (gateway), GSM, wifi and Bluetooth modules.
- **Illegal Car Tracking System using ML** [Git](#) **May 2023 - July 2023**
  - Implemented real-time Deep Learning and OCR system to capture license plates, mitigating congestion from external car influx in dense urban areas like New York, New Delhi, Tokyo, Shanghai.
  - After certain days, non-native plates trigger owner alerts, urging timely state exit, using Twilio client service.
- **Internet Security Analysis using ML** [Git](#) **May 2023(on going)**
  - Internet security is vital as attackers often target vulnerabilities. This project explores ML-based Internet Security Analysis, leveraging patterns in network traffic data.
- **Complaint Reporting System** [Git](#) **Nov 2022 - Feb 2023**
  - A real time Python and MySQL-based system, reports crimes (frauds, robbery etc.) and social issues (dirty parks, garbage etc).
- **Medical Store Stocks Manager** [Git](#) **June 2022 - August 2022**
  - Efficient medical store inventory management system: Real-time, Python-based with user-friendly TKinter GUI and MySQL database.
- **Casino - A Game of chance** [Git](#) **Oct 2021**
  - A virtual game in C, C++ and command line tools: Player starts with money, rolls dice. If favorable, large money increments to the acct. if unfavorable, smaller deduction takes place.

## Awards and Participations

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- **IRC Robotics Competition:** 2nd Rank Holder at district level
- **IEEE WebDev Hackathon :** Among top 8 teams to reach the final round
- **Inter DPS Lawn Tennis Competition :** 1st Rank Holder

## Upcoming Publication

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### **BLE-based Power Efficient Design using accelerometer for Cow Health Monitoring System**

By Radhika Raina, Lalit Kumar Baghel, **Sarthak Jain** and Suman Kumar

- \* Cow Health Monitoring project aims for feature extraction and selective activity transmission (resting, grazing, etc.) to the AWS database to minimize data size.
- \* This involves configuring the NRF5340DK to apply a specific threshold for achieving the goal.