SARTHAK JAIN

+91-9310136343 sarthakjainssjj@gmail.com -creatersarthakjain SarthakJaindebugger Portfolio

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, Sonepat, Haryana, India **2007-2019**
AISSCE (Class X) *Percentage: 94/100*

Technical Skills

- **Programming Languages:** C/C++, Python, Java, Dart
- **Web Technologies:** HTML, CSS, Bootstrap, NodeJS, React, Flutter, Wordpress
- **Databases and Cloud:** MySQL, AWS
- **Machine Learning and Deep Learning:** OpenCV, TensorFlow, OCR, NLP(Natural Language Processing), PyTorch
- **Version Control and Collaboration:** Github, Git
- **Hardware and micro controllers:** Arduino, Raspberry Pi

Experience

• Indrprastha Institute of Information Technology, Delhi **Nov 2023 (Present)**
Research Assistant *New Delhi, India*
Working on emotion classification using speech datasets in different languages, using continual learning and various other Deep Learning approaches to prevent Catastrophic forgetting.

• Indian Institute of Technology, Ropar **Sep 2023 - Nov 2023**
Research Assistant *Ropar, Punjab, India*
Worked on BLE-based Power Efficient Design using accelerometer sensor 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 an 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 Visualization 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**
- 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

- **CodeChef competitive programming**: Max 3 stars (Highest rating 1543)
- **IEEE WebDev Hackathon** : Among top 8 teams to reach the final round
- **IRC Robotics Competition**: 2nd Rank Holder at district level
- **Google AI— Explore ML** : Attended the intermediate track
- **World Wide Fund for Nature** : Attended webinar on 'Snow leopard conservation'
- **Inter DPS Lawn Tennis Competition** : 1st Rank Holder

Upcoming Publication (under review)

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.