





ANKITA SHARMA

International Institute of Information Technology

Education  [Technical Blog](#)  ankita19101@iiitnr.edu.in  [Ankita Sharma](#)  [ankitaS11](#)

International Institute of Information Technology, Naya Raipur (IIIT-NR)

2019 – 2023

B.Tech. : Electronics and Communication - 8.64 CGPA (till 4th sem)

Raipur, Chhattisgarh

Krishna Public School Raipur

2017 – 2018


Class - XII, CBSE - 92.8%

Raipur, Chhattisgarh

Open Source Projects/Contributions

My own Image Processing Library - pyImageEdits

October 2021 - Present

- The library contains optimized implementation to process image from scratch (source code written in CPP and called in Python using pybind11). It allows to play with *.ppm* images of type *P3* by providing features like image resize, horizontal flip, vertical flip, rotate image, image filters etc.  [ankitaS11/pyImageEdits](#)

PyTorch

October 2021 - Present

- Adding OpInfos for logical_not, logical_xor, and logical_or operators in PyTorch. This includes writing sample inputs functions, resolving any flaky tests failures, and also improved testing framework.
- PyTorch's ops index_add and index_fill had incorrect documentation (names of arguments), which has been fixed now.
- Fix for gradient opinfo that fails locally with Python 3.10 by creating a tensor first and then converting the dtype explicitly using .to(dtype) call.

Projects

Real-Time Vehicle Detection and Categorization in Foggy Conditions

August 2021 - Present

- The idea is to combine image processing, and computer vision algorithms to increase visibility in foggy conditions in order to increase vehicle detection and categorization accuracy to help autonomous cars operate in adverse weather.
- This project will also focus on getting 10-15 FPS output, so as to deploy in real-time scenarios.

Crop Yield Prediction in India using ML

April 2021

- The model focuses on predicting the crop yield in advance by analyzing factors like weather and soil parameters, state, season, crop type using various supervised machine learning techniques. This helps the farmers to know the crop yield in advance to plan and choose a crop that would give a better yield.
- Accuracy Obtained:** 97.2 % using Random Forest
- Tech Stack:** Machine Learning (Random Forest, DecisionTree, KNN), Python

Work Experience

Summer Research Intern, IIT - Bhilai

May 2021 – August 2021

Mentor: Gagan Raj Gupta, Visiting Associate Professor - IIT Bhilai

Raipur, Chhattisgarh

- Scraped websites and collected landslide descriptions from the year 2006-2020, prepared dataset, extracted information from descriptions using NER(Named Entity Recognition), and performed data preprocessing.
- Analyzed and visualized data using matplotlib, folium, and seaborn.
- Designed and managed GIS database from scratch using MongoDB and automated new entries into the database.
- Twitter Bot that reports recently occurred landslides as well as predicts the landslide events.
- Tech Stack:** Python, Natural Language Processing (NLP), MongoDB

Technical Content Writer, LearnElectronics

Jan 2020 – Feb 2020

- Published around 10-12 articles related to IoT (interfacing DIY projects using nodeMCU, GSM), TCP/IP v/s OSI model, Wein bridge oscillator, cryptocurrency v/s fiat money

Technical Skills

Languages: Python, C/C++, Java, HTML/CSS, SQL, Shell Scripting

Softwares and Utilities: VS Code, Anaconda, Eclipse, PyCharm, MongoDB, MySQL, Git

Libraries: PyTorch, scikit-learn, OpenCV, matplotlib, seaborn, NumPy, pandas, pybind11, GeoPy, BeautifulSoup, PyMongo

Operating Systems: Linux, Windows

Leadership / Extracurricular

Speaker at HactoberFest

2020 – 2021

IEEE Bombay Section, Student Branch - NIT Raipur

Placement Coordinator, Placement Cell - IIIT NR

2021 – Present

Actively worked with the Training and Placement Cell to bring exciting opportunities for the students of IIIT NR

Vice Incharge, Debate Club - IIIT NR

2020 – 2021

Organized and Coordinated many debate events