

EDUCATION

Sant Longowal Institute of Engineering and Technology | Bachelor of Technology in Electronics and Communication Engineering | 2021 | CGPA: 7.5/10 | **techFest -20** Core Committee member | **Socialfest-19** Web development member | **SSDC** Tutor and Problem setter for Competitive Programming Events.

EXPERIENCE

DEEPLARNING INTERNSHIP | TATA CONSULTANCY SERVICES

- Worked on FACTS 7.0 (Fingerprint Analysis Criminal Tracing System)
- Role: - Core and Delta Detection by image processing and deep learning technique.
- Implemented Research Paper, Used **Candidate analysis** to detect the location of core or delta, **U-Net** Architecture for training the model to improve the accuracy (achieved 98%) and speed. Trained YOLO v5 on custom dataset. Tested the output with existing fingerprints data.

LANGUAGES AND TECHNOLOGIES

- **Programming Languages** – C++, Python
- **Machine Learning** –Numpy, pandas, Sklearn, Keras, CNN, ConvLSTM, nltk
- **Computer Vision** – OpenCV, Pillow, Skimage, Optical Flow
- **Robotics** –Atmega 2560, Arduino, V-Rep, Atmel Studio, MATLAB
- **Android App Development** –Java, XML, Firebase
- **Web Development** (beginner) – HTML, CSS, Node.js, SQL

COMPETITIVE PROGRAMMING AND HACKATHON ACHIVEMENTS

- **Codechef** (4☆) ID- [amrit5](#)
- **Codeforce** (highest rating 1600+)
- **Hackerrank**: 6☆ and around 4000 points.
- SIH 19 Grand Finalist organization DrReddys
- **SIH 20** Grand Finalist organization ISRO
- Top 1% in many Competitive Programming Contest and Won some of them.
- Qualified Snackdown 2019 up to 2nd stage
- Solved 1500+ DS and Algorithm Questions
- Qualified **E-Yantra** up to 3rd stage.

PROJECTS [GITHUB](#)

SMART INDIA HACKATHON 2020 | ISRO

Dec 2019 – Aug 2020

- Developed an algorithm to detect clouds in INSAT3D and INSAT3DR satellite images, predicted the next cloud frame in the sequence and location of cloud in subsequent images. [link](#)
- Algorithm Used: -Optical flow Algorithm (Horn and Schunk (HS)), ConvLSTM

Classify the Lunar Rocks

Aug 2019 – Oct 2019

- Successfully Completed Machine Learning A-Z course from Udemy and Built a CNN based project using Keras to classify different types of rocks in lunar rock image datasets. [link](#)

E-Yantra -A Robotic Competition | IITB

Oct 2018 – Mar 2019

- Built an AI based Bot that could carry objects from one place to another using the shortest path in the given Arena and can able to avoid the path that contains obstacle. (team id-eYRC#1215).
- Used Dijkstra Algorithm to find the shortest path. task1 [link](#), task2 [link](#)
- Hardware: - Atmega 2560, STK 500, Color Sensor, IR Sensor, Proximity Sensor

Review Analysis

Oct 2019 – Nov 2019

- Analysis of positive and negative restaurant review using NLTK, Naive Bayes [link](#)

Android App Development Training

June 2018 -July 2018

- Successfully Completed Training on Android App Development and Built an android app to post articles with some pictures using Realtime database and backend as a service (Firebase). Java, XML.