Kharagpur Winter of Code - KWoC 2020

In the following post, I would like to describe my first ever Open Source contribution experiance!

Towards the mid-year, I realized that a lot of my peers engaged in Open Source contributions and took utmost pride in it! As a complete novice, I too started looking at various Youtube channels that laid out various plans to crack GSoC & Outreachy! But, knowing about myself, I knew that I had to take baby steps towards these competitions and master my basic skillset to have a solid start. One of my former connections had liked a post regarding KWoC registrations and I realized that this was the best way to start, and the rest is history!

About KWoC

KWoC provides a great opportunity to get acquainted with GitHub along with Git commands and contribute to open source efficiently!

My Journey @KWoC 2020

The entire process was overwhelming to me at the start and slowly picked up. I started out by choosing relevant tags with respect to my technology stack - Python GUI, Deep Learning, Machine Learning, Computer Vision & Python.
I got a chance to commit to 4 major projects despite my busy schedule. I worked on OpenCV Projects, Face Recognition based Attendance App, Pothole Detection App, and MarvellOS.

1. **OpenCV Projects**

Link: https://github.com/supu2701/Open-CV-Projects

This project was guided by Shreyasi Kumar, and it involves Object planning & shortest Route Planning, Maze Solving & Object Detection Planning.

I contributed to the project in the domain of Maze Solving & Object Detection Planning. I completed code for Maze set in 50 x 50 board, specifically in the dilation & contour finding part. For the object detection part, I had to make use of major feature detection algorithm functions from the OpenCV library, such as the Shi-Tomasi Filter & Harris Corner Detection Algorithm. This project allowed me to brush up on my Image Processing skills!

2.Face Recognition based Attendance App

Link:
https://github.com/Marauders-9998/Attendance-Management-using-Face-Recognition

The goal of this project was to have an automatic attendance marking app using the face detection process. For this project, I applied my Python GUI skills to the application. My main contribution was towards an autocomplete feature for the text-fields involving the class register. After this project, I understood the importance of code formatting, and how it eases the process. It's a new habit I picked up and will ensure to use it throughout my time!

3. Pothole Detection App
Link: https://github.com/utkarsh0702/Pothole-Detection-Visualization

The main aim of this project was to create a real-time detection of potholes and map it into Google Maps, for users to drive safely.
My main contribution was to create a faster deep neural network that enables pothole detection. So, I picked out the Efficient Detection network, which is the current state of the art model for bounding box detection. So far I've only contributed to the code, I plan on fine-tuning the entire model for pothole images.

4. MarvellOS
Link: https://github.com/akshgpt7/MarvellOS

In this project, I created a Gallery system in the Operating System setup which enables the user to upload an image of this choice and update his picture gallery . I understood the use of creating dynamic keys and the importance of resolving PEP-8 violations in the code , and got acquainted with Flake8 tool .

My overall experience was great and my only regret is that I could have managed my time properly and contributed to more such awesome repositories and learn more ! I'm looking forward to be more adventurous for KWoc 2021 ! :)