**Progress Report: October 2020**

Project Name : Hiding Images in Images

Mentor : A Shrikant

2nd Yr. Members : Garvin Pokhra and Sujay Chuttar

**Objectives at the start of the project**

The second year student members were given the following tasks at the start of this month:

1. Learning basic python syntaxes and libraries like numpy and matplotlib.
2. Learning basics of image processing and Open CV from various courses and tutorials,
3. Familiarizing with the notebook interfaces like Jupyter Notebook and Google Colaboratory.
4. Implementation of all their knowledge in notebooks.

**Progress of the Month**

Both of the second year members showed good enthusiasm to begin the work. They were able to cover basic python syntaxes and libraries quite soon. They are also cover some image processing basics along with implementing them in Open CV. Both of them were given a simple python implementation code for LSB hiding, to learn the behavior of python coding.

Garvin has almost finished with the Open CV tutorials and basic python. He has also looked upon the implementation of LSB hiding. It took him mere two weeks to get a grip on Open CV, under tight schedules.

Sujay has referred to various tutorials and lectures for basics in python and Open CV. He is also coping up against his busy schedules.

I, myself, have been researching on various reversible transformations through deep learning, which can lead to better hiding techniques.

**Expected work to be carried out next Month (Considering the upcoming ENDSEMS)**

We expect to finish the implementation of the basic hiding procedure of LSBs and progress a bit to FFT-kernel based method. Some of these implementations need to be done before December break (probably after the ENDSEMS).

I, personally, would like to work upon some new ideas in deep learning to improve hiding process. It involves compression-reconstruction type network architecture.