Project Review

Air-Canvas (Draw in Air)

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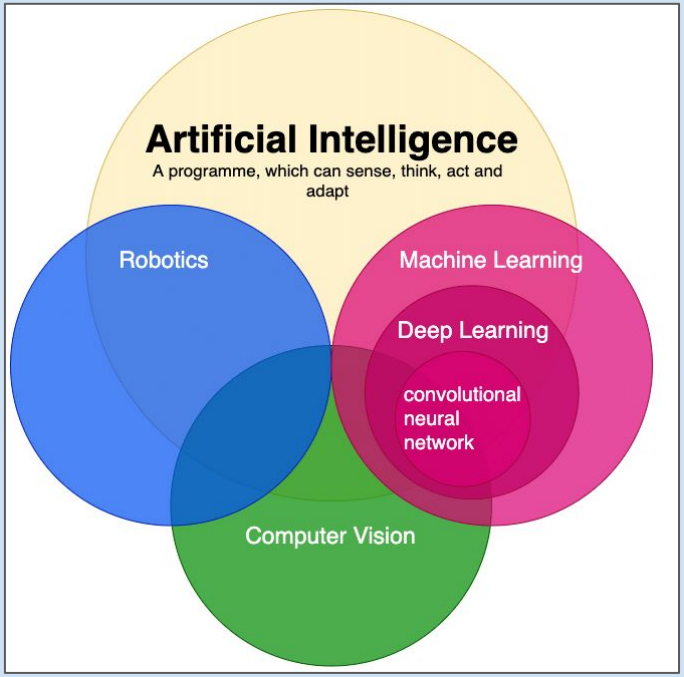
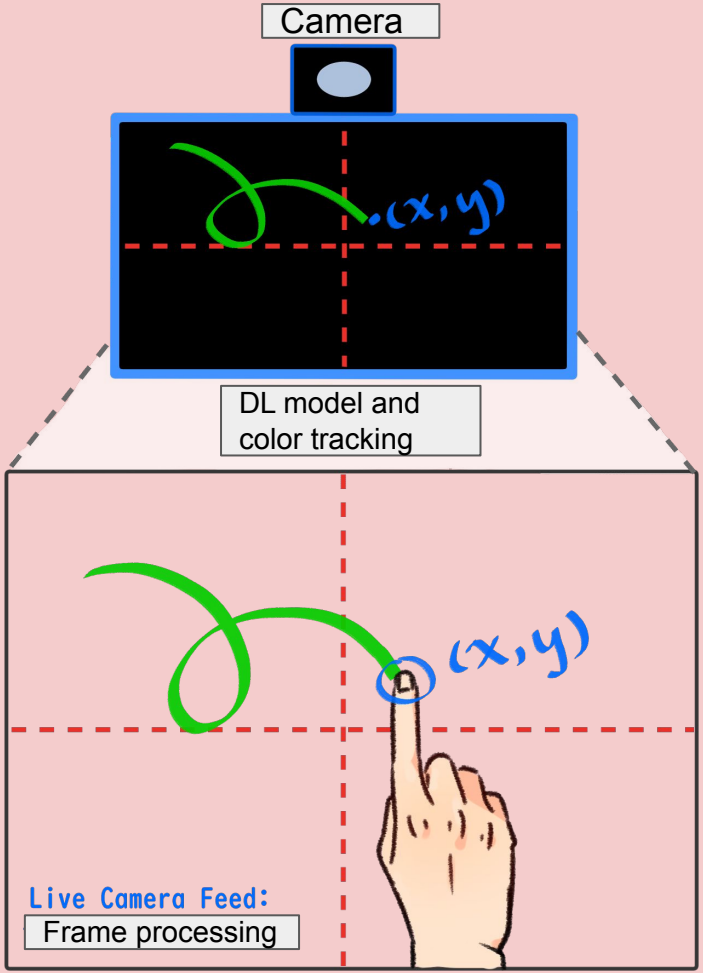
AI and Computer Vision

- Computer vision is a field of artificial intelligence that train computers to interpret and understand the visual world.
- Machines can accurately identify and locate objects. then react to what they “see” using digital images.
- AI-based computer vision can sense the surroundings to identify various objects, such as pedestrians, traffic signals, and more.
- The technology helps a device to recognize the face to verify the identity of the person.



About..!


AIR CANVAS
Hi There,


Camera
(x,y)
DL model and
color tracking
(x,y)
Live Camera Feed:
Frame processing

How it Works ??

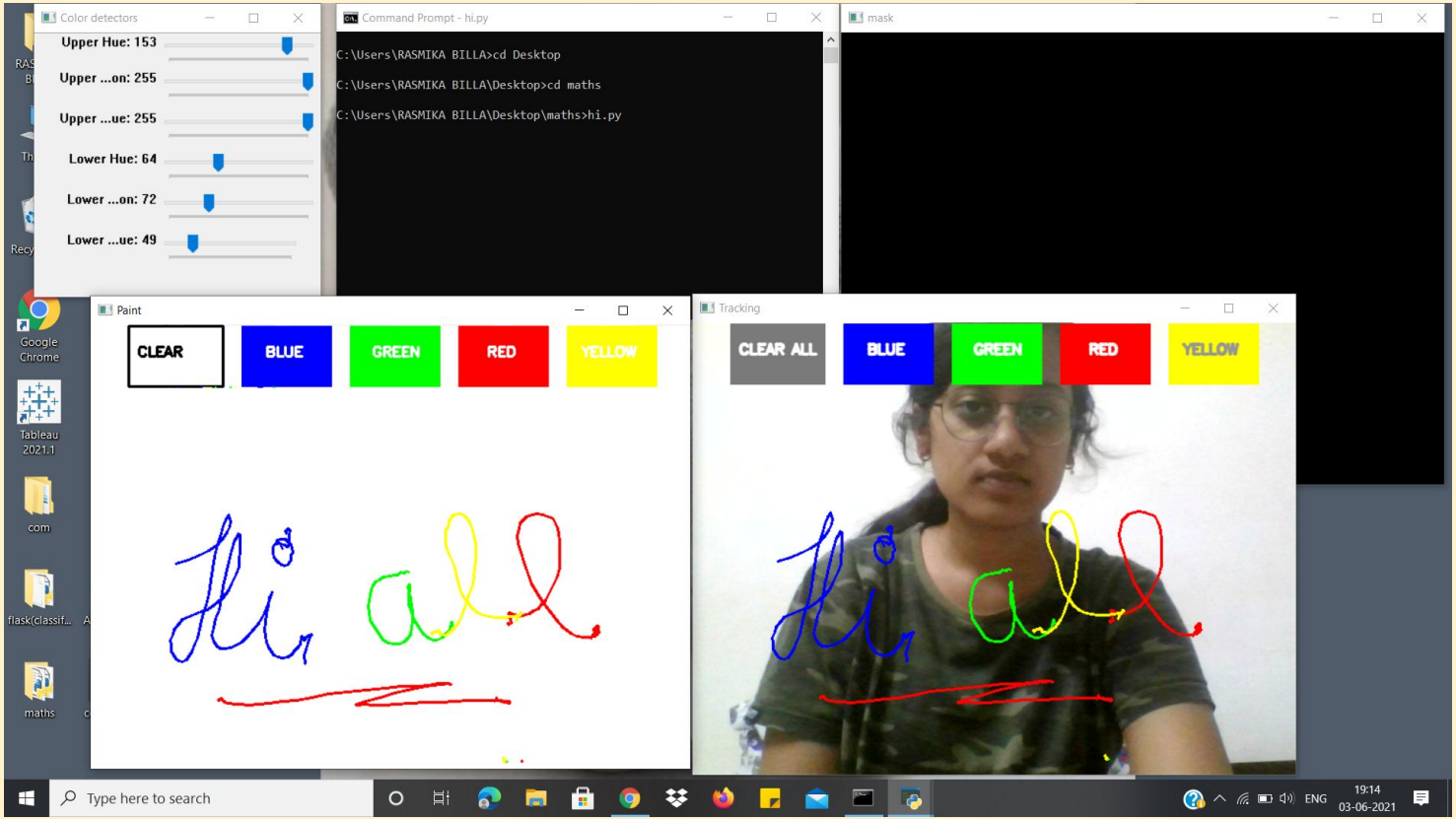
The working of this project in four major points :

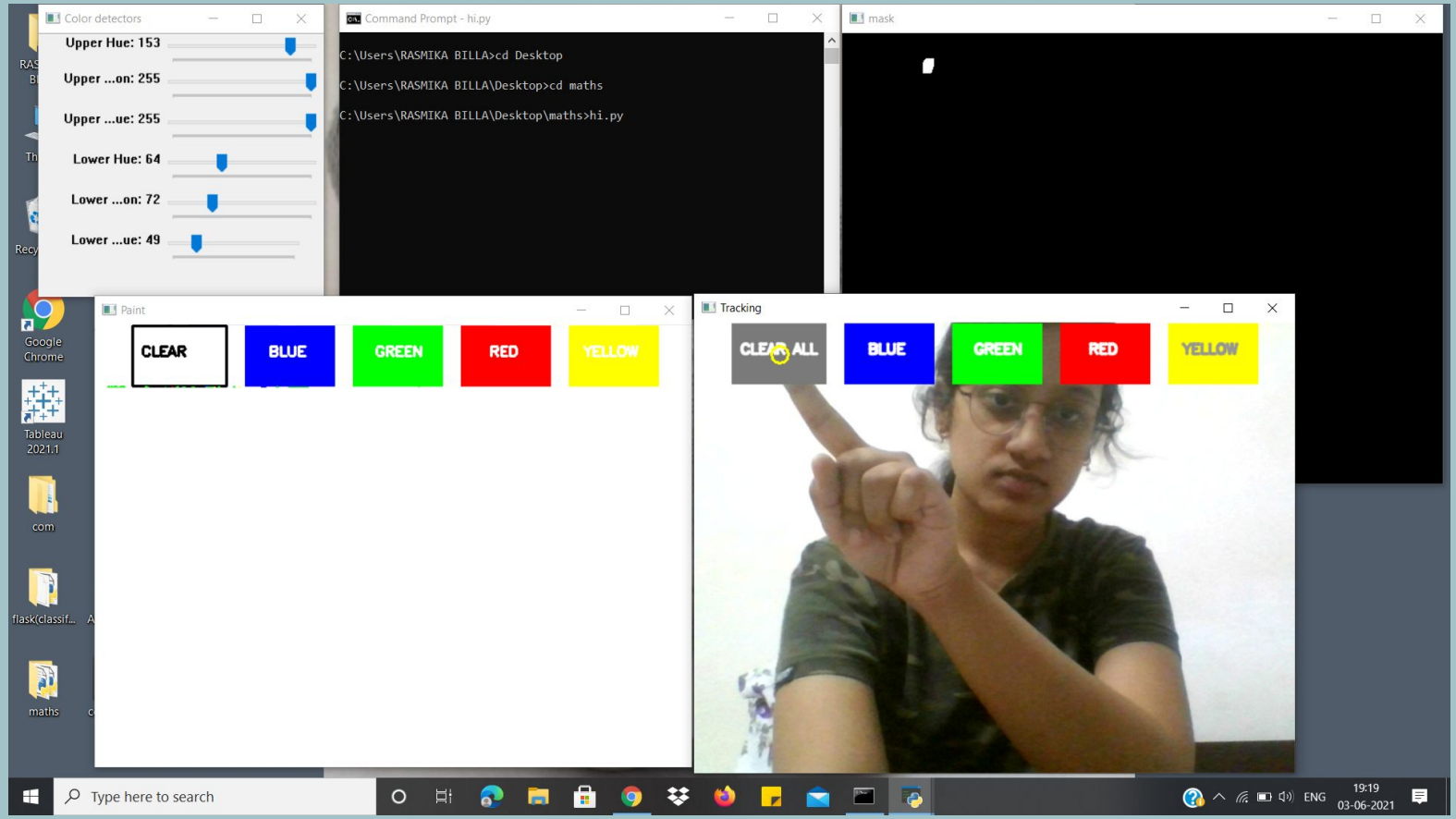
1. Understanding the HSV (Hue, Saturation, Value) color space for (**Color Tracking**) And tracking the small colored object at finger tip.
2. Detecting the Position of Colored object at finger top and forming a circle over it. (**Deep Learning**)
3. Tracking the fingertip and drawing points at each position for air canvas effect. (**Frame Processing**)
4. Fixing the Minor Details of the code to function the program smoothly. (**Algorithmic Optimization**)

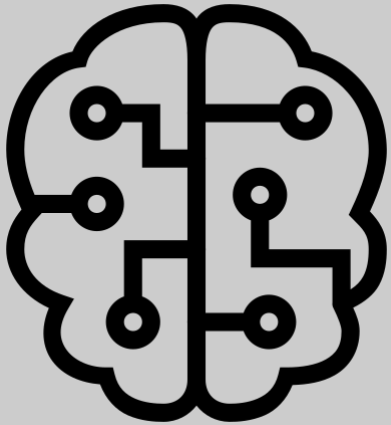
Features

1. Can track any specific colored pointer.
2. User can draw in four different colors and even change them without any hussle.
3. Able to rub the board with a single location at the top of the screen.
4. Cost reduction when compared to Touch Screens.
5. Need for a dustless class room for the students to study in.
6. Easy programming (use of DL and OpenCV).
7. No need to touch the computer once the program is run.

Output (Screenshots):




Color detectors
Upper Hue: 153
Upper ...on: 255
Upper ...ue: 255
Lower Hue: 64
Lower ...on: 72
Lower ...ue: 49
Command Prompt - hi.py
C:\Users\RASMIKA BILLA>cd Desktop
C:\Users\RASMIKA BILLA\Desktop>cd maths
C:\Users\RASMIKA BILLA\Desktop\maths>hi.py
mask
Paint
CLEAR
BLUE
GREEN
RED
YELLOW
Tracking
CLEAR ALL
BLUE
GREEN
RED
YELLOW
Google Chrome
Tableau 2021.1
com
flask(classif...
maths
Type here to search
ENG
19:19
03-06-2021



Thank you.!