

Title: “Smart Shiksha-Deep Learning Based Hand Gesture Recognition for On-Screen Writing and Streaming For Online Classes”**Aim:**

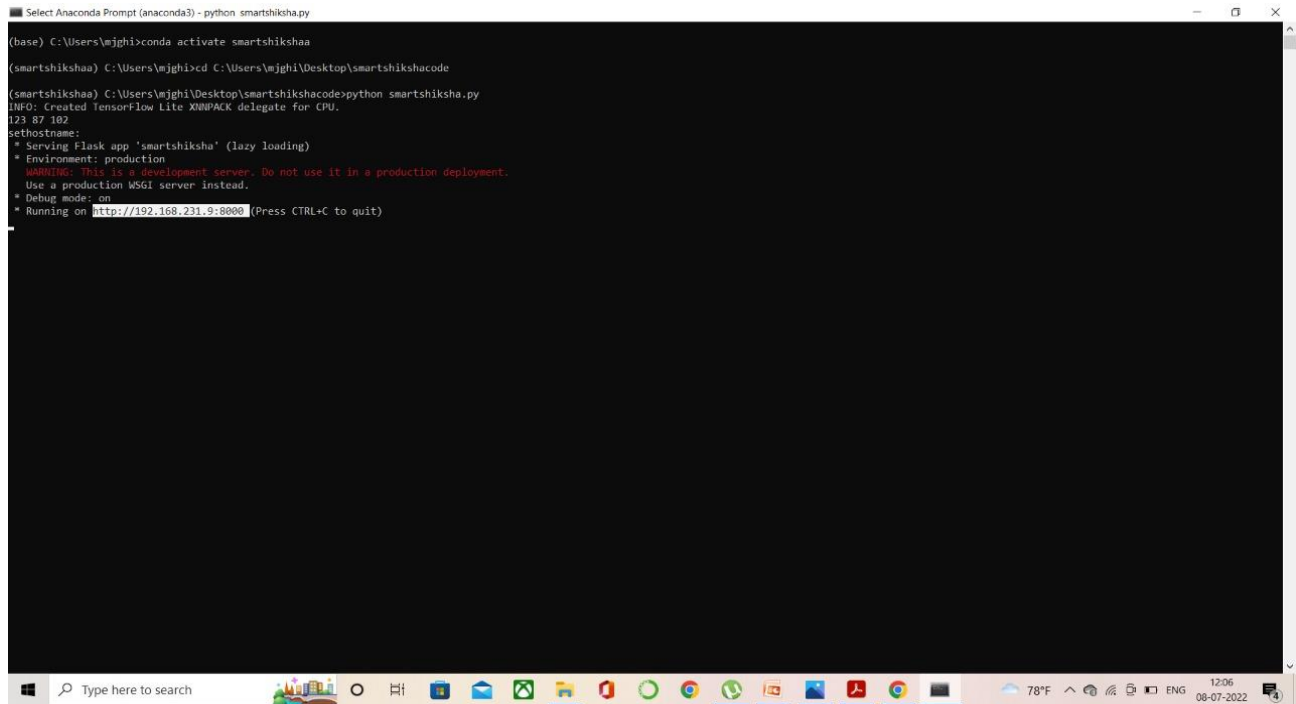
To develop an effective online teaching platform by providing a powerful AI based tool for onscreen writing and editing by detecting the hand gestures as well as streaming to the multiple students.

Objectives:

- To develop a hand gesture recognition using hand pose estimation using the camera video stream as data using deep learning.
- To implement hand point tracking system to utilize the detected gestures to write on screen for the purpose of online teaching.
- To implement different gestures for different applications while teaching such as on screen writing, erasing etc.

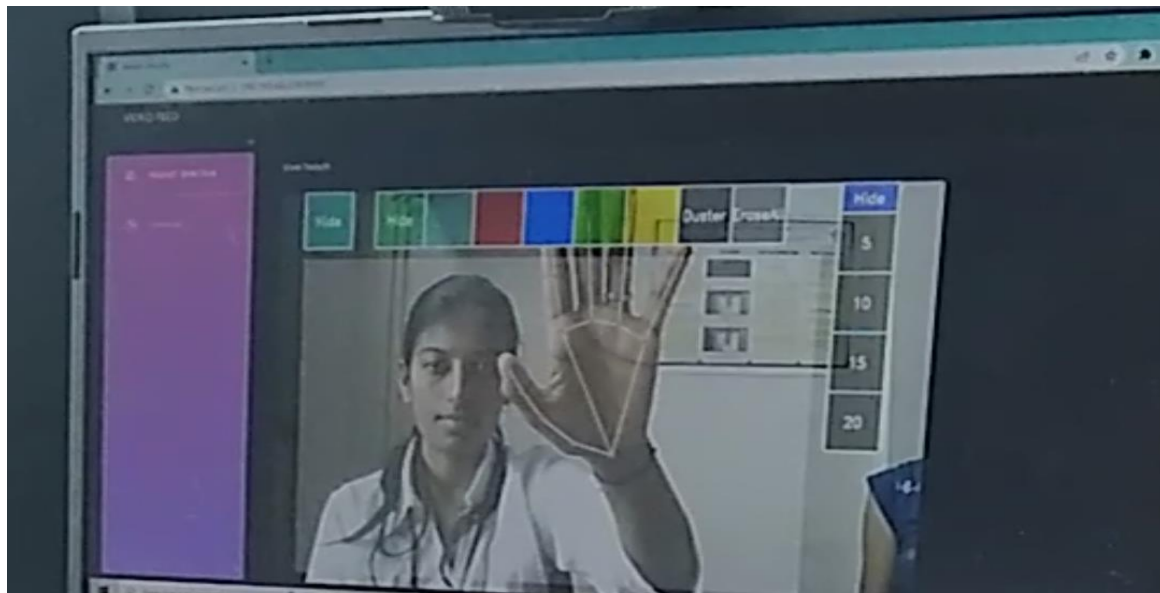
Results:

1. Generating the link to share to the students



```
Select Anaconda Prompt (anaconda3) - python smartshiksha.py
(base) C:\Users\mjghi>conda activate smartshiksha
(smartshiksha) C:\Users\mjghi>cd C:\Users\mjghi\Desktop\smartshiksha\code
(smartshiksha) C:\Users\mjghi\Desktop\smartshiksha\code>python smartshiksha.py
INFO: Created TensorFlow Lite XNNPACK delegate for CPU.
1/23 07:10Z
sethostname:
* Serving Flask app 'smartshiksha' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Running on http://192.168.231.9:8000 (Press CTRL+C to quit)
```

2. Selecting writing board, pen color, font size and erasing options.



3. Writing on the screen.

