Sign Language to English (SLATE8)

Progress Presentation #4

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Milestone Summary

Mar	1	ASL converted from Linux to Windows	Nathan	Presentation program to recognize images on cellphone to database
	2	Convert Python batch/shell programs from Linux to Python 2.7 for Windows.	Nathan	
	3	ASL Demonstration with single character recognition.	Nathan	
	4	Train existing ASL software to recognized whole words.	Nathan	

Activity Summary

HIGHLIGHTS:

- Installed Python 2.7 for Windows and remove MS Visual Studio 2017.
- Converted ASL designed for Python 2.7 in Linux to Python 2.7 for Windows 10.
- Succeeded in executing main Python interface, i.e., Camera, hand targets.

LOWLIGHTS

- Need to convert Python 2.7 bash/shell for Linux to Python 2.7 for Windows 10.
- Can not test for correctness until all ASL parts are converted to Python 2.7 for Windows 10. The sound bash file needs to be converted to Python for Windows.

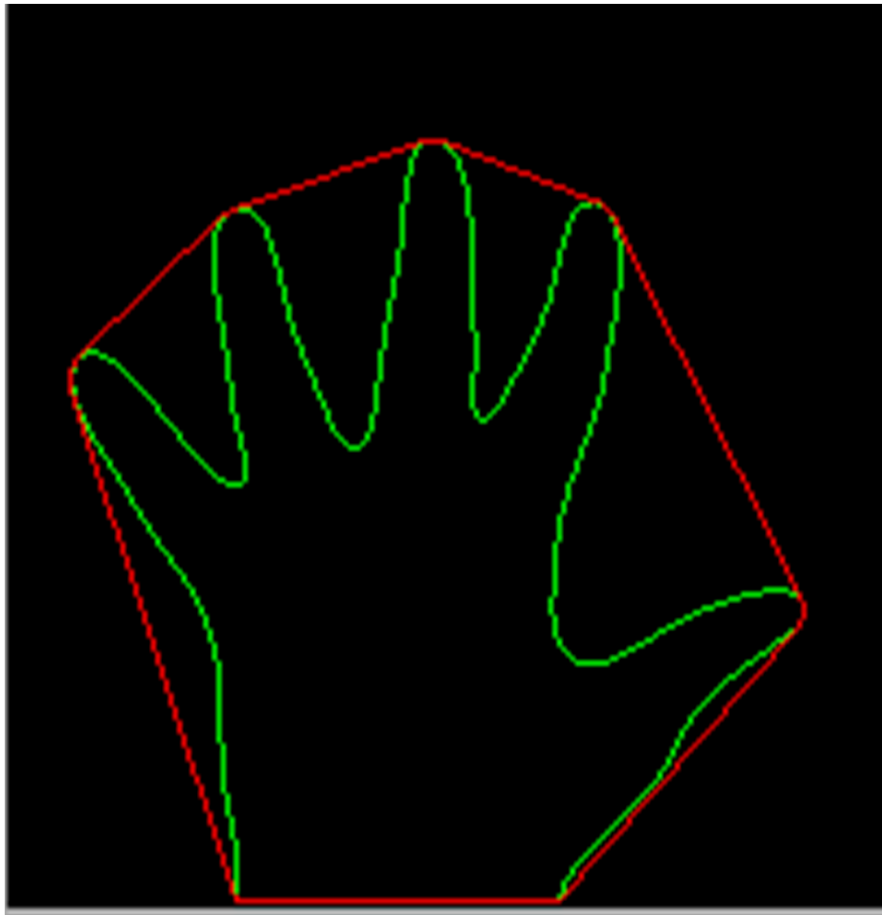
Creation of Threshold

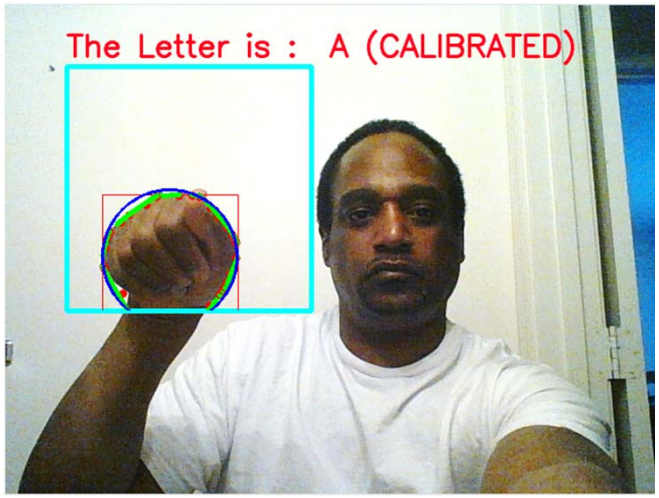
Threshold Image of The Letter "H"

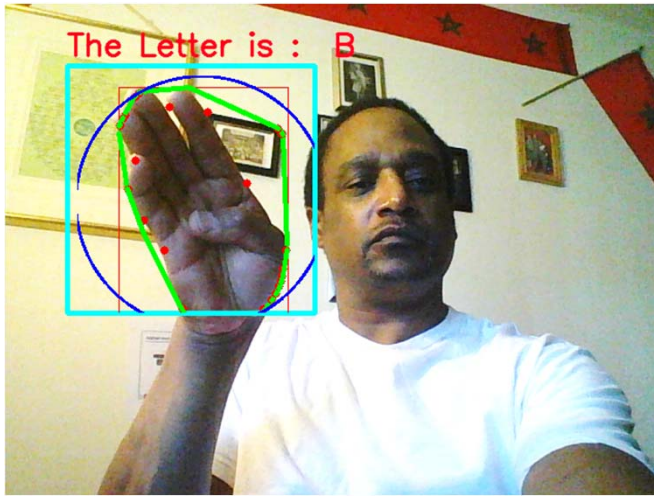
Creation of threshold image is very crucial for Hand detection . Isolating the foreground from the Background is essential as we want the hand to be the region of Interest.

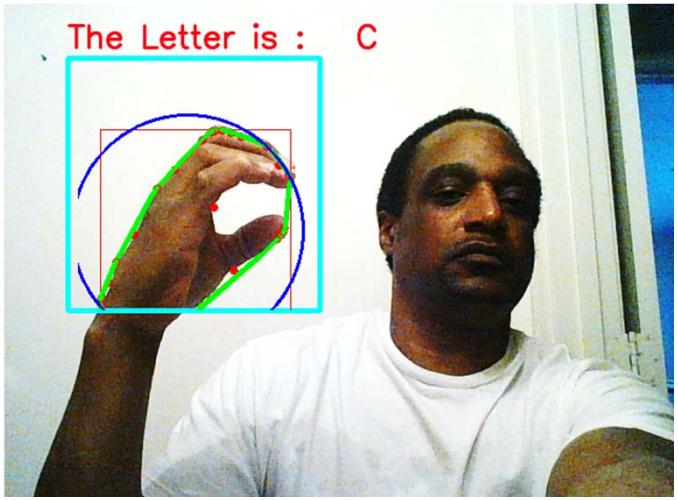
Contour of Hand with Convex Hull Identification.

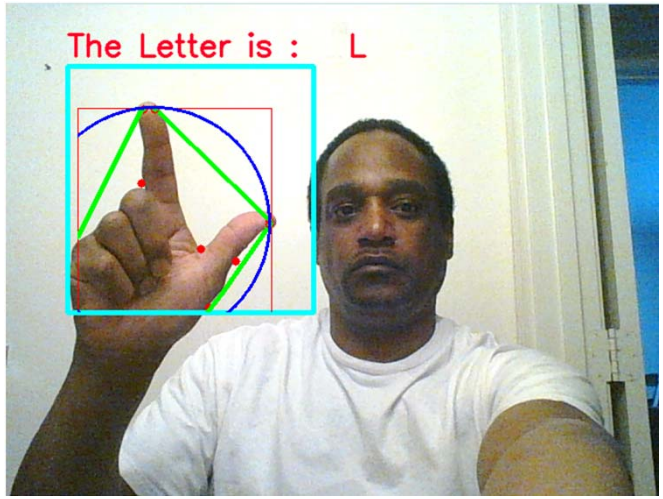
- The Hand is identified using an inbuilt function that finds Contours to which OpenCV provides. The function later then returns an array of co-ordinates of the formation of the Contour.

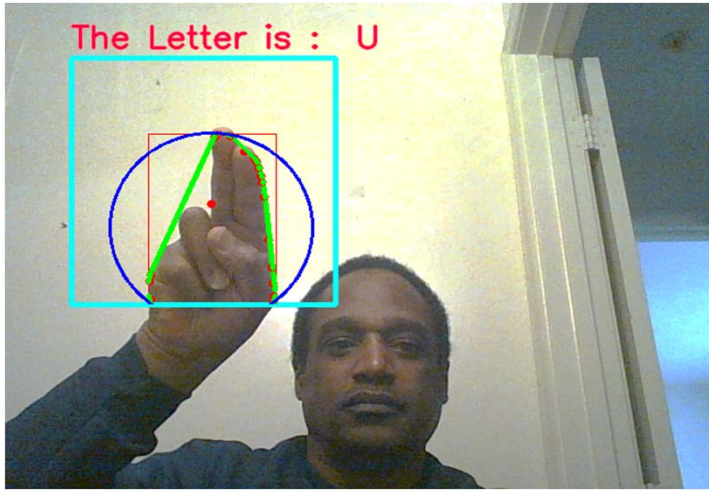


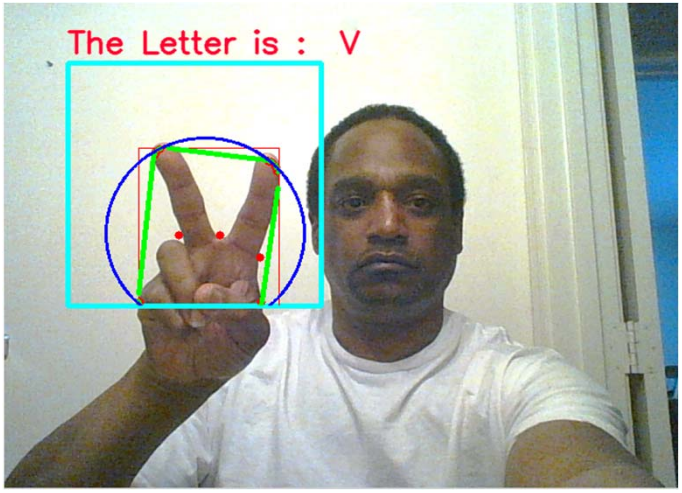

The Letter is : A (CALIBRATED)

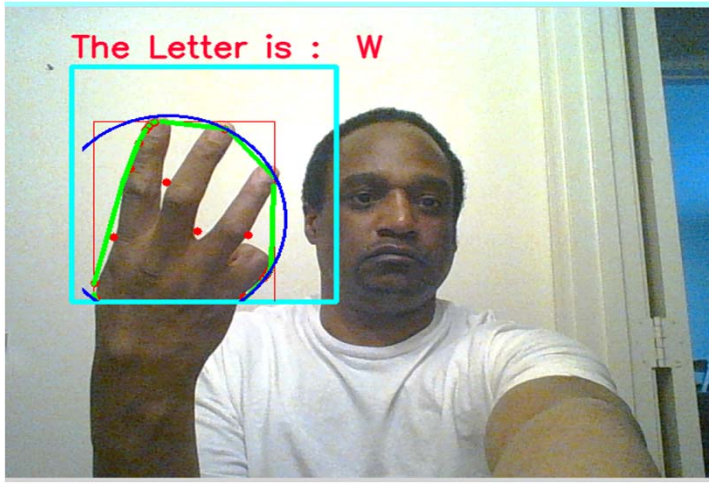

The Letter is : B

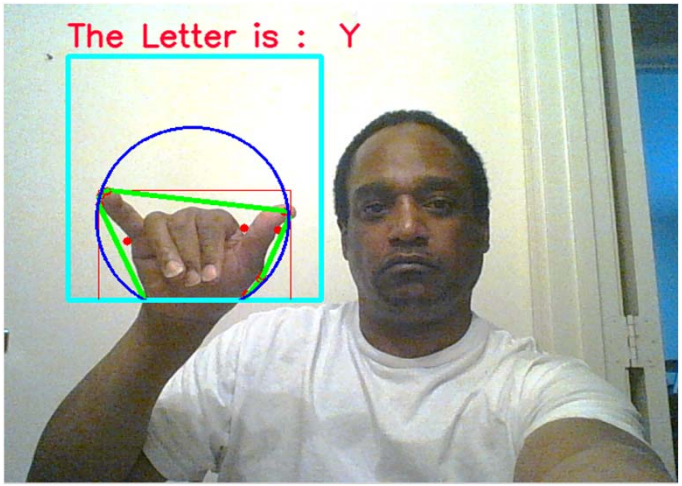

The Letter is : C


The Letter is : L


The Letter is : U


The Letter is : V


The Letter is : W


The Letter is : Y

Risk Management

Rank	Risk	Mitigation Approach
1	Continue to learning Python for Windows to convert the bash file to Python.	W
2	Create documentation on program for future reference. Pass project to next senior class for next semester.	R

Planned Activity for Next Period

- Presentation demonstration on single syllable demonstration with computer and python software.