

Accuracy Check

S.No	What we did	Observation	Accuracy
1	Blinking: We tried counting the number of times we are actually blinking and then we compared it with the number of times it actually detected.	<p>We observed that sometimes due to lack of proper detection, our eyes are not getting detected properly and that is why most of the time we were getting less number of blinking than we actually did.</p> <p>In very few cases, it also counted more times than we actually blinked.</p> <p>The reason we found out for this was again due to improper detection as sometimes our eyes aspect ratio calculated according to the landmarks goes beyond our threshold even when our eyes are closed.</p>	Our accuracy was around 61 percent.
2	Yawning: We tried counting the number of times we actually yawned and then we compared it with the number of times it actually detected.	We observed that sometimes due to lack of proper detection, Yawns were not getting detected properly and due to which counter didn't increase and also sometimes counter jumped showed more no. of yawning than actual	Accuracy in this case was around 93 percent.
3	Mobile Detection: We counted the total number of frames in which mobile phone was in the frame and compared it with the number of frames in which our code detected whether there is a mobile or not.	We observed that there were some frames when the phone was not getting detected properly.	Accuracy was around 74 percent.
4	Face Detection: We counted the total no. of frames whenever our face was present in the frame and compared it with the no. of times dlib was able to detect the	We observed that sometimes due to lack of proper face detection, our face was not getting detected properly.	Accuracy was around 95%

	face .		
5	Head Pose Detection: We counted the total number of frames in which it was detecting our face properly when we turned our face in left or right direction with the actual number of frames in which our head pose is different.	First of all we observed that beyond a certain limit in both left and right direction dlib stops detecting our faces. So we observed things within this limit. There were some instances in which our faces were not getting detected in both left and right directions.	Accuracy when we turned left was around 81.15% Accuracy when we turned left was around 82.79%
We observed the same thing under lowlight and also the same thing after enhancing them. (We have used videos instead of performing in real time as we were unable to run the enhancing code in our installed systems, so we ran it on colab where there were certain constraints in enhancing real time video).			
6	Blinking(lowlight conditions)		Accuracy in lowlight was around 6.4 percent. Accuracy after enhancing our video was around 66.2 percent.
7	Yawning(lowlight conditions)		Accuracy in lowlight was around 73 percent. Accuracy after enhancing

			our video was around 98 percent.
8	Head Pose-turning Right		<p>Accuracy when we turned right and in lowlight was around 10%</p> <p>Accuracy when we turned right and in enhanced form was around 90%</p>
9	Head Pose-turning Left		<p>Accuracy when we turned left and in lowlight was around 51%</p> <p>Accuracy when we turned left and in enhanced form was around 89%</p>