

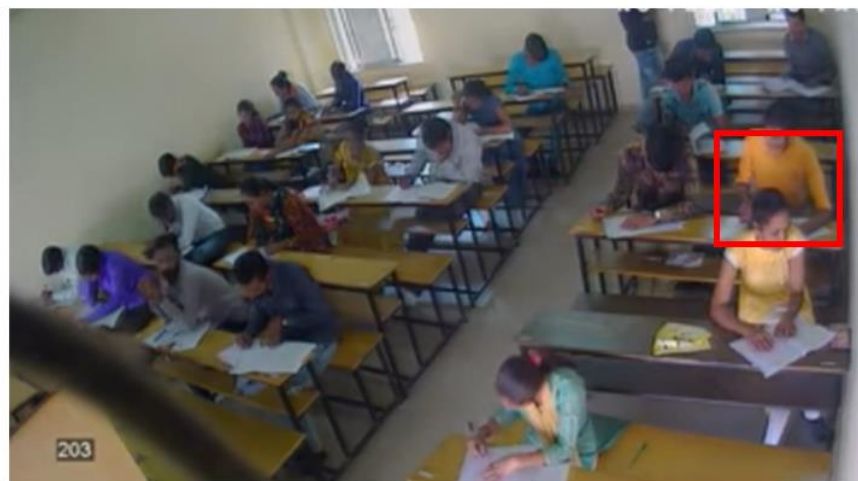
# SIH 2020 - SOFTWARE EDITION

- **Ministry/ Organization Name:** CBSE
- **Problem Statement:** How to Prevent Cheating in Exams? (DA178)
- **Team Name:** Amigos
- **Team Leader Name:** Parth Ghughriwala
- **College Code:** 1-3509732211

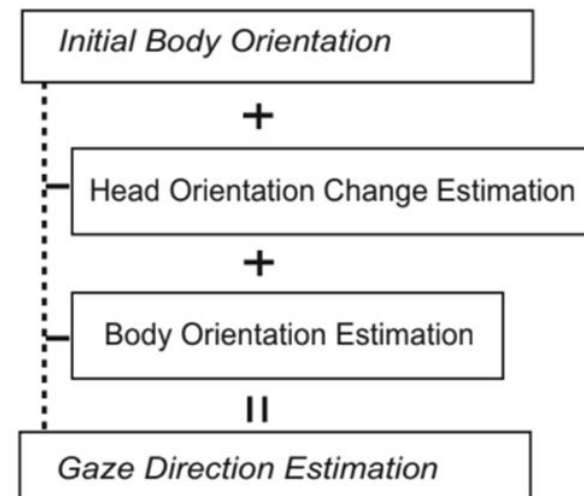
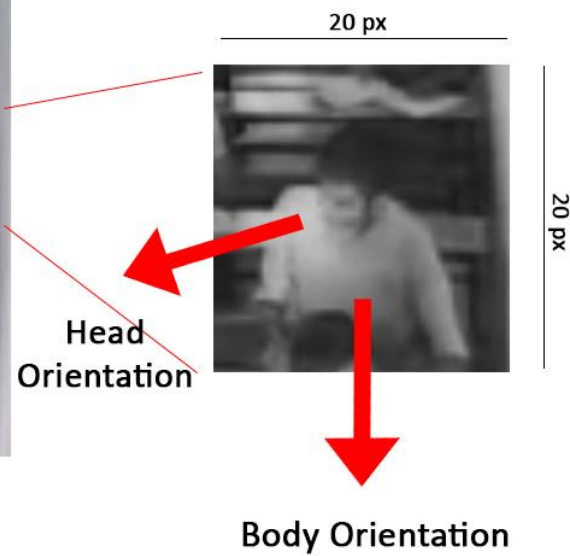
## IDEA / SOLUTION

- Cheating in exams is a huge concern as it deprives people of their fair reward and appreciation.
- We are developing an integrated system which can help in preventing cheating in examination using video processing and deep learning algorithms.
- System will detect possible occurrences of cheating and provide the timeline at which it occurred.
- It will detect such activities by estimating human Body and Head Orientation change around yaw axis even from low-resolution data.
- Body Orientation is calculated using Shape Context Algorithm to match the outline of upper body.
- Head Orientation is calculated by analyzing the motion flows of SIFT features around head region.
- Using Head and Body Orientation, Gaze direction will be estimated to detect focus of attention.
- System will classify cheating occurrences into confidence intervals and present them as High, Moderate and Low possibility level of cheating.

# IDEA / SOLUTION



Video Footages



## TECHNOLOGY STACK

## USE CASE

## DEPENDENCIES

## SHOW STOPPER

- Dlib
- OpenCV
- Tkinter
- Python3
- Tensorflow 2.0

- Online/Offline examination hall
- Proctored Exams

- System with High processing power
- 720p or higher resolution video preferred

- Reduces surveillance time significantly