Team Members

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Name of Project: Video Bokeh Effect

Abstract:

- Normally we have seen bokeh effect applied to a given picture by performing subject detection as an initial step and then blurring the rest of the background. The same was also performed by us as a part of an assignment.
- Our idea is to extend the same to video imaging. The simplest idea is to use an existing algorithm (see references) to apply the bokeh effect on each frame, and later apply a gaussian filter also across time. This:
    - The background will be blurred in the video while the subject will remain intact
    - Time smoothing will remove any fluctuation going on in the background either present in the initial video or added during bokeh filtering.

References:

- https://www.researchgate.net/publication/277476495_Bokeh_Effects_Based_on_Stereo_Vision
- Class Slides and Assignment on Image Background smoothing

Dataset:

- Personally captured videos for blurring.
- PreTrained Foreground Mask detection ML or DL models -- onetime training might be needed.
    - Eg: *vision.ForegroundDetector()* of Matlab

Evaluation Strategy:

- Since our project is related to adding some characteristics to the video to make it look better, thus it would be visually evaluated.