**Image stitching for vehicles using OpenCV**

**Link:** [**https://drive.google.com/file/d/1z1JeITXoBlNRflSjhz1RtqzfWD39ApoE/view?usp=sharing**](https://drive.google.com/file/d/1z1JeITXoBlNRflSjhz1RtqzfWD39ApoE/view?usp=sharing)

Detecting objects and discovering insights out of images is the new boom in the computer vision industry. Image stitching is one such technique which discovers key points & invariant descriptors from different images and uses them to form a single wide image.

In this task, we’ll be stitching different images taken out from a video to get a complete image of the vehicle.

STEP1: Image Extraction

Firstly we need to make a folder for saving images using os library then we need to extract different frames from the 144 secs long video using the cv2.Videocapture object. Frames are captured at 25 fps which gives a total of 3600 images. Now we can write the images to the specified folder using cv2.imwrite method. Once this step is done, we can release all spaces and windows.

STEP2: Data Pre-processing

In this step we take all images of the truck and converted it to image arrays using cv2.imread method so that stitcher object can be fitted to this data for finding invariant local areas & keypoints using SIFT. Finally, image arrays are appended to an array for further use.

STEP3: Stitch Object Creation & Main

Now we can create a cv2.stitcher.create object to fit the image data to it. Object returns status & stitched Image. Running the main function will produce the final output stitched Image & status gives us the error codes 0-OK, 1- More images required,2 etc.

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