

 README.md

Optical Flow Feature Detection

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File Structure:

Folders

Datasets : all input videos Haarcascade_Classifier : two classifiers. We used haarcascade_frontalface_alt.xml classifier because it has better performance Output_Video : all output tracked videos: martian.m4v , lee.m4v and tyrion.m4v First_Frame_with_Features : contains all first frame images with feature points and boxes overlaid Resources is micellaneous, can be ignored

Function Files

helper.py : contains drawBox function which copies image with feature box overlaid on it, and gaussian convolution function gaussianPDF which returns an operator for lx and ly

To run test videos

faceTracking.py : main function produces the tracked videos.

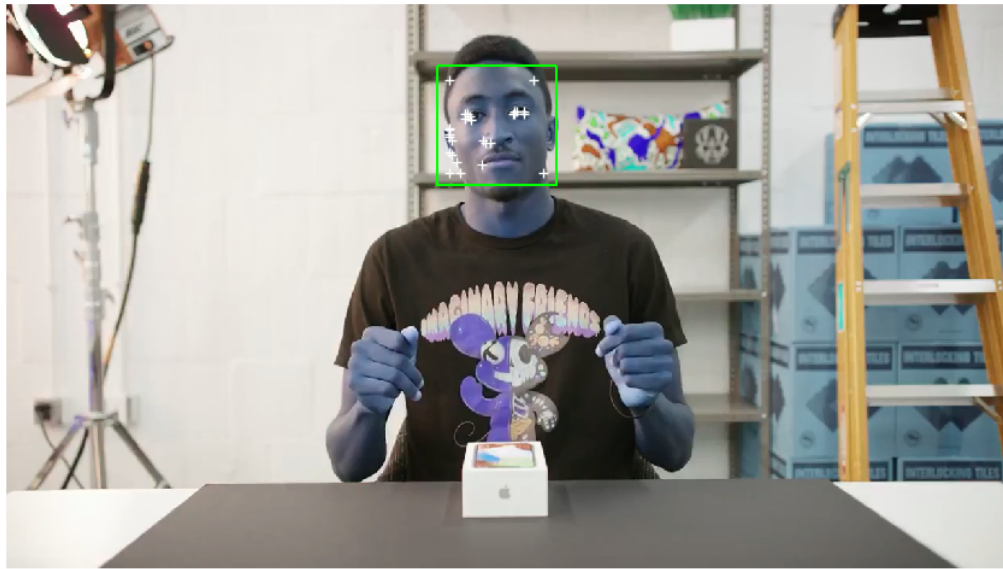
To test on different input videos, change rawvideo file path and tracked_video file path. If a tracked_video with the same name already exist, videowriter does not override and will fail to produce new tracked video file.

First Frame of Test Videos

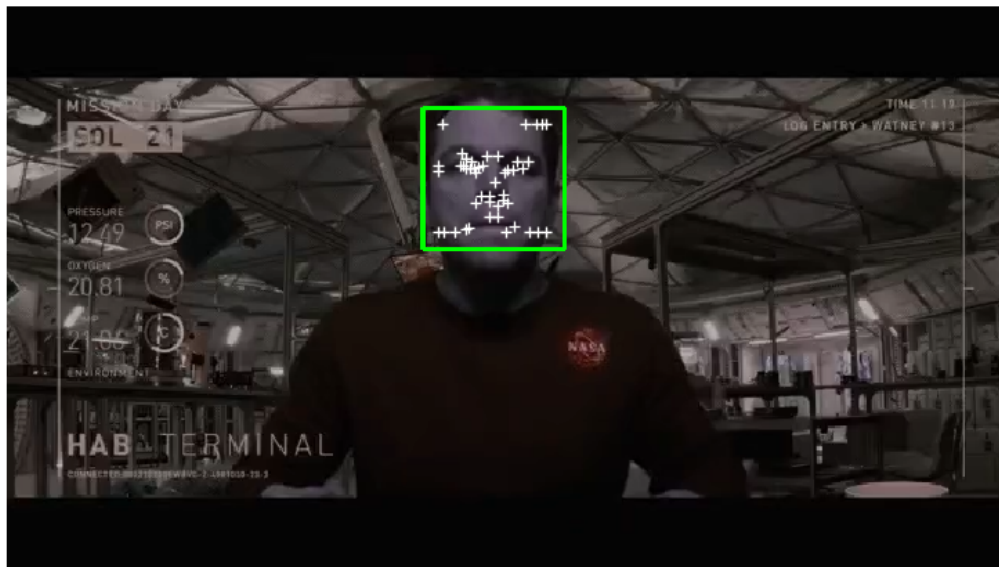
note: the color scale is a bit off

Easy

Marques Brown Lee



The Martian



Medium

Tyrion Lannister



Hard

Stranger Things

