Prerequisite Tutorials

The participants are advised to read through and attempt the following tutorials before the buildathon day. I have graded them according to their perceived complexity. I think the tutorials should be read in the order given.

Basic Tutorials

- **Installing opencv-python in windows** : http://opencvpython.blogspot.com/2012/05/install-opencv-in-windows-for-python.html
- **Getting started with images** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_gui/py_image_display/py_image_display.html#display-image
- **Getting started with videos**
  (comments: In the 3rd sample code, instead of
  "`fourcc = cv2.VideoWriter_fourcc(*'XVID')`
  `out = cv2.VideoWriter('output.avi',fourcc, 20.0, (640,480))`"
  put

  #fourcc = cv2.VideoWriter_fourcc(*'XVID')
  out = cv2.VideoWriter('tut3_1.avi',0, 20.0, (640,480))
)
  http://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_gui/py_video_display/py_video_display.html#display-video
- **Drawing Functions in OpenCV** :
  (comments: After the first '`img = np.zeros((512,512,3), np.uint8)`' delete '`img =`' for every other line. For example '`cv2.line(img,(0,0),(511,511),(255,0,0),5)`' instead of '`img = cv2.line(img,(0,0),(511,511),(255,0,0),5)`'. This is because the output of the draw commands are integers. **)**

  https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_gui/py_drawing_functions/py_drawing_functions.html#drawing-functions
- **Basic Operations on Images** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_core/py_basic_ops/py_basic_ops.html#basic-ops
- **Trackbar as the Color Palette** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_gui/py_trackbar/py_trackbar.html#trackbar

Intermediate Tutorials

- **Face Detection using Haar Cascades** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_objdetect/py_face_detection/py_face_detection.html#face-detection
- **Template Matching** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_imgproc/py_template_matching/py_template_matching.html#template-matching
- **Understanding Features** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_feature2d/py_features_meaning/py_features_meaning.html#features-meaning
- **Background Subtraction** :
  (comments: Instead of cv2.createBackgroundSubtractorMOG()
  it should be cv2.BackgroundSubtractorMOG()
)
  https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_video/py_bg_subtraction/py_bg_subtraction.html#background-subtraction

Advanced Tutorials

- **Changing Colorspaces** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_imgproc/py_colorspaces/py_colorspaces.html#converting-colorspaces
- **Meanshift and Camshift** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_video/py_meanshift/py_meanshift.html#meanshift
  (comments: Delete '`img2 =`' from line 41. Similar error as above. Replace img2 with frame in the subsequent lines.

  Change line 39 from '`pts = cv2.boxPoints(ret)`' to '`pts = cv2.cv.boxPoints(ret)`'

)
- **Epipolar Geometry** : https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_calib3d/py_epipolar_geometry/py_epipolar_geometry.html#epipolar-geometry
  (comments: On lines 39 and 40, change '`np.int32`' to '`np.float32`'

)
- **Depth Map from Stereo Images** :
  (comments:change the line 8 from
  stereo = cv2.createStereoBM(numDisparities=16, blockSize=15)

  to

  stereo = cv2.StereoBM(0,ndisparities=16, SADWindowSize=15)

This should work

)

https://opencv-python-tutroals.readthedocs.org/en/latest/py_tutorials/py_calib3d/py_depthmap/py_depthmap.html#py-depthmap