**First time setting up:**

* Install the miniconda version and pycharm version from the requirements folder
* Note only python 3.7 and Tensorflow 1.15 works with this version of Object Detection
* Run this command in the base to download needed packages : pip install TensorFlow==1.15 lxml pillow matplotlib jupyter contextlib2 cython tf\_slim
  + (only TensorFlow 1.x.x works so I use 1.15)

**OPTIONAL(NEEDED ONLY FOR IMAGES N NOT REALTIME IMAGE DETECTION IN JUPYTER)**

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* Next we need to install protoc
  + From the ‘research’ directory run this command to compile protoc: protoc object\_detection/protos/\*.proto --python\_out=.
* For the jupyter notebook script to work and to work on our local machine we also need pycocotools. Run pip install pycocotools-windows
  + If this does not work, instead run this command which grabs the wheel file needed pip installgit+https://github.com/philferriere/cocoapi.git#egg=pycocotools^&subdirectory=PythonAPI
* If we want to run the object\_detection scripts on a local machine, we need to go to the ‘research’ directory and run these two commands:
  + Python setup.py build
  + Python setup.py install

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* To run the object detection online run jupyter notebook
  + If this command gives you errors try running conda install jupyterand try again
  + This will open a web page in your browser. Navigate to object\_detection/colab\_tutorials/object\_detection\_tutorial.py
  + When the new page opens, click on ‘Run All’ under the cells tab
* To run it on local PC we have to make a few changes. We will use the old version of the object detection tutorial with some modifications due to the current version not working correctly yet. You can grab the file I have made [here](https://github.com/Bengemon825/TF_Object_Detection2020)
* To use our webcam instead of detecting images we will need to download cv2.

Use pip install opencv-python

We have to download the wheel file from [here](https://www.lfd.uci.edu/~gohlke/pythonlibs/#opencv)

* + Download the wheel version that matches your version of python
  + To install it you have to move to the directory where it is downloaded and run pip install ‘name of file’
  + Next you can grab the script we will run from