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| Link | Description | | Log/Folders |
| Tensorflow | | | |
| <https://tensorflow-object-detection-api-tutorial.readthedocs.io/en/latest/install.html> | How to run precompiled tensorflow cpu only | |  |
| <https://stackoverflow.com/questions/47068709/your-cpu-supports-instructions-that-this-tensorflow-binary-was-not-compiled-to-u> | 1. I could run and compile tensorflow once by looking at this post with bazel. However, I don’t recall the exact command by it included the avx2 and avx flags. 2. I tried the intel document command (the very simple one with opt flag only, it took forever and never ended.   bazel build --config=mkl --config=opt //tensorflow/tools/pip\_package:build\_pip\_package   1. I never tried the one that is already compiled and suggested in this post for windows. | | 1. C:\machine-learning  2. log   |  | | --- | | e/kernels/mkl\_quantize\_op.cc  Execution platform: @local\_execution\_config\_platform//:platform  cl : Command line warning D9002 : ignoring unknown option '-mavx'  cl : Command line warning D9002 : ignoring unknown option '-mavx2'  cl : Command line warning D9002 : ignoring unknown option '-mfma'  cl : Command line warning D9002 : ignoring unknown option '-msse4.2'  cl : Command line warning D9002 : ignoring unknown option '-march=native'  .\tensorflow/core/util/mkl\_util.h(1285): error C2131: expression did not evaluate to a constant  .\tensorflow/core/util/mkl\_util.h(1284): note: failure was caused by a read of a variable outside its lifetime  .\tensorflow/core/util/mkl\_util.h(1284): note: see usage of 'dim'  .\tensorflow/core/util/mkl\_util.h(1286): error C2131: expression did not evaluate to a constant  .\tensorflow/core/util/mkl\_util.h(1284): note: failure was caused by a read of a variable outside its lifetime  .\tensorflow/core/util/mkl\_util.h(1284): note: see usage of 'dim'  .\tensorflow/core/util/mkl\_util.h(1288): error C3863: array type 'dnnl\_dim\_t [kNumDims]' is not assignable  .\tensorflow/core/util/mkl\_util.h(1289): error C3863: array type 'dnnl\_dim\_t [kNumDims]' is not assignable  [8,498 / 12,327] Executing genrule @llvm-project//llvm:abi\_breaking\_gen; 763290s local | |
| <https://github.com/tensorflow/tensorflow/issues/8037> | I am not sure if I used any of this github post. | |  |
| <https://www.tensorflow.org/install/source_windows> | Tensorflow document about how to build from source on windows. The bazel stuff was useful. | |  |
| <https://github.com/tensorflow/tensorflow/releases> | Supposed to find out my desired release branch but at the end I could only build from master, which I don’t know which branch it is.  Before with precompiled tensorflow latest version I had “dll not found issue” I had to downgrade to 2.0 or 2.2 (can’t remember) that worked fine.  But with the compiled one I didn’t really need that.  Build from master worked just fine.  Master required bazel was  \_TF\_MIN\_BAZEL\_VERSION = '2.0.0'  \_TF\_MAX\_BAZEL\_VERSION = '3.99.0'  But the others were just too old. I couldn’t download the correct bazel for them. | |  |
| <https://www.msys2.org/> | Yes, I needed msys2 to build with bazel. I am not how it just worked. I guess I was lucky. | |  |
| <https://docs.bazel.build/versions/master/install-windows.html> | How I installed bazel | |  |
| <https://gist.github.com/mabdrabo/8678538> | This is the python sound recorder git repo I used and worked like a charm. I asked him a question, he didn’t answer but still his code works with my customization like one channel, 16000 rate and wave post fix. | | C:\PycharmProjects\sound-rec.py (I am not really running this from pycharm)  In command line just type  python sound-rec.py   |  | | --- | | FORMAT = pyaudio.paInt16  CHANNELS = 1  RATE = 16000  CHUNK = 1024  RECORD\_SECONDS = 3  WAVE\_OUTPUT\_FILENAME = "file.wav" | |
| Audio Recording | | | |
| [https://www.lfd.uci.edu/~gohlke/pythonlibs/#pyaudio](https://www.lfd.uci.edu/~gohlke/pythonlibs/" \l "pyaudio)  https://stackoverflow.com/questions/52283840/i-cant-install-pyaudio-on-windows-how-to-solve-error-microsoft-visual-c-14 | Apparently sometimes only importing libraries in python doesn’t work!  Therefore, you have to download the wheel, import the downloaded one somehow. I don’t recall it now! You can find most of them here. For pyaudio as an example based on your computer model and the version of python I guess, you can download the wheel.  In my case this one PyAudio-0.2.11-cp37-cp37m-win\_amd64 was the correct choice. | | C:\PycharmProjects\ PyAudio-0.2.11-cp37-cp37m-win\_amd64.whl |
| <https://medium.com/@sometimescasey/building-tensorflow-from-source-for-sse-avx-fma-instructions-worth-the-effort-fbda4e30eec3> | She just says yes building from source helped a lot. Tell me how you did it bastard! | |  |
| <https://stackoverflow.com/questions/41293077/how-to-compile-tensorflow-with-sse4-2-and-avx-instructions> | Jars answer here: flags helped me with configure.py  However at the end I still get the error that the build is not optimized for avx2 avx. dammit | |  |
| <https://software.intel.com/content/www/us/en/develop/articles/intel-optimization-for-tensorflow-installation-guide.html> | Funny intel guild on how to build with avx2 flags but it differs from linux to windows! Gosh this is so weird. | | I could never set this output\_dir |
| <https://developers.google.com/web/fundamentals/media/recording-audio> <https://developer.mozilla.org/en-US/docs/Web/API/MediaRecorder/MediaRecorder> <https://developer.mozilla.org/en-US/docs/Web/Media/Formats/codecs_parameter> | Yes, it gave me some insight on how MediaRecorder on JS should work but his solution never worked entirely until I found the awesome github repo. | |  |
| <https://github.com/shilan/record-audio/tree/master/record-server-example> | Two examples on running js in browser. I think I can actually deploy this to my website of which I have forgotten the name to it. The page should still be open on my tablet.  Should give it a try. I think the rate and channel is set correctly but media type wave is not supported!  It says it should be here: <https://developer.mozilla.org/en-US/docs/Web/Media/Formats/Containers#Ogg> | | npm install  node server.js  <http://localhost:3545/>  C:\Yugi\record-audio\record-server-example  Should commit it asap. To my github <https://github.com/shilan/record-audio> |
| PI | | | |
| <https://github.com/splitbrain/rpibplusleaf/blob/master/rpiblusleaf.pdf> | Awesome PI pinout to print.  The pdf print fits. PNG didn’t! |  | |
| <https://raspberrypi.stackexchange.com/questions/106256/finding-ip-return-hex-address> | ping -4 -n 1 raspberrypi.local | 192.168.0.43 | |
| <https://www.tinkerboy.xyz/raspberry-pi-test-sound-output/>  <https://iotbytes.wordpress.com/connect-configure-and-test-usb-microphone-and-speaker-with-raspberry-pi/> | arecord --format=S16\_LE --duration=5 --rate=16000 --file-type=raw out.raw  aplay --format=S16\_LE --rate=16000 out.raw  speaker-test -t wav -c 2 |  | |
|  | Raspberry user: pi  Pass: Sar13600  Tightvnc pass: Git13600  Run tightvnc from windows and type host from running via putty by typing tightvnc in ssh |  | |
| Host | | | |
| https://www.heliohost.org | I have signed in here.  Just don’t remember the user pass. Should be in my email.  Server: johnny |  | |
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| Commands | Description |
| From the built tensorflow to train, successfully trained it. | C:\machine-learning>python tensorflow/examples/speech\_commands/train.py --wanted\_words left,right,stop,go,backward |
| This Also failed | bazel build -c opt --copt=-march=native --copt=-mavx --copt=-mavx2 --copt=-mfma --copt=-mfpmath=both --copt=-msse4.2 -k //tensorflow/tools/pip\_package:build\_pip\_package |
| Configure.py | In this file you can change the output folder. I just used the defaults. |
| my pre compiled tensorflow dir (python directory)  C:\Users\Chingool\Anaconda3\Lib\site-packages  I have built one myself in (trained with fewer words but never freezed or tested that)  C:\machine-learning |  |
| python tensorflow/examples/speech\_commands/train.py --start\_checkpoint=/tmp/speech\_commands\_train/conv.ckpt-17000  python tensorflow/examples/speech\_commands/freeze.py --start\_checkpoint=/tmp/speech\_commands\_train/conv.ckpt-18000 --output\_file=/tmp/my\_frozen\_graph.pb  python tensorflow/examples/speech\_commands/label\_wav.py --graph=/tmp/my\_frozen\_graph.pb --labels=/tmp/speech\_commands\_train/conv\_labels.txt --wav=/tmp/speech\_dataset/left/a5d485dc\_nohash\_0.wav  python tensorflow/examples/speech\_commands/label\_wav.py --graph=/tmp/my\_frozen\_graph.pb --labels=/tmp/speech\_commands\_train/conv\_labels.txt --wav=/tmp/speech\_dataset/mytest\_left/01.wav | Train or train from the check point.  Freeze the trained one.  Test the wave you have. Graph didn’t really work! |
| Conda install jupyter (I had them already on compiled one)  Conda install scipy (“)  In c:/machine learning directory  Jupyter notebook  Before plots run this command to see the plots  %matplotlib notebook  <https://stackoverflow.com/questions/52862234/jupyter-notebook-plot-inside-a-function-figure-is-not-plotted> | Install  Copy paste url into browser and opens the jupyter |
| Last package distribution | $ pip install yolk3k  $ yolk -V django  https://stackoverflow.com/questions/4888027/python-and-pip-list-all-versions-of-a-package-thats-available/26664162#26664162 |
| Upgrade python | python -m pip install --upgrade pip |

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| Camera |  |  |
| Link |  |  |
| <https://www.raspberrypi.org/documentation/usage/webcams/> | Take pictures |  |
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| In my setup on windows I have two different version of python  Python 3.7 >> command python  Python 3.8 >> command python3  Make pip run with python 3.8  python3 -m pip3 install some\_module  Take a look at some\_module available wheels, see which python version is compatible with. |  |

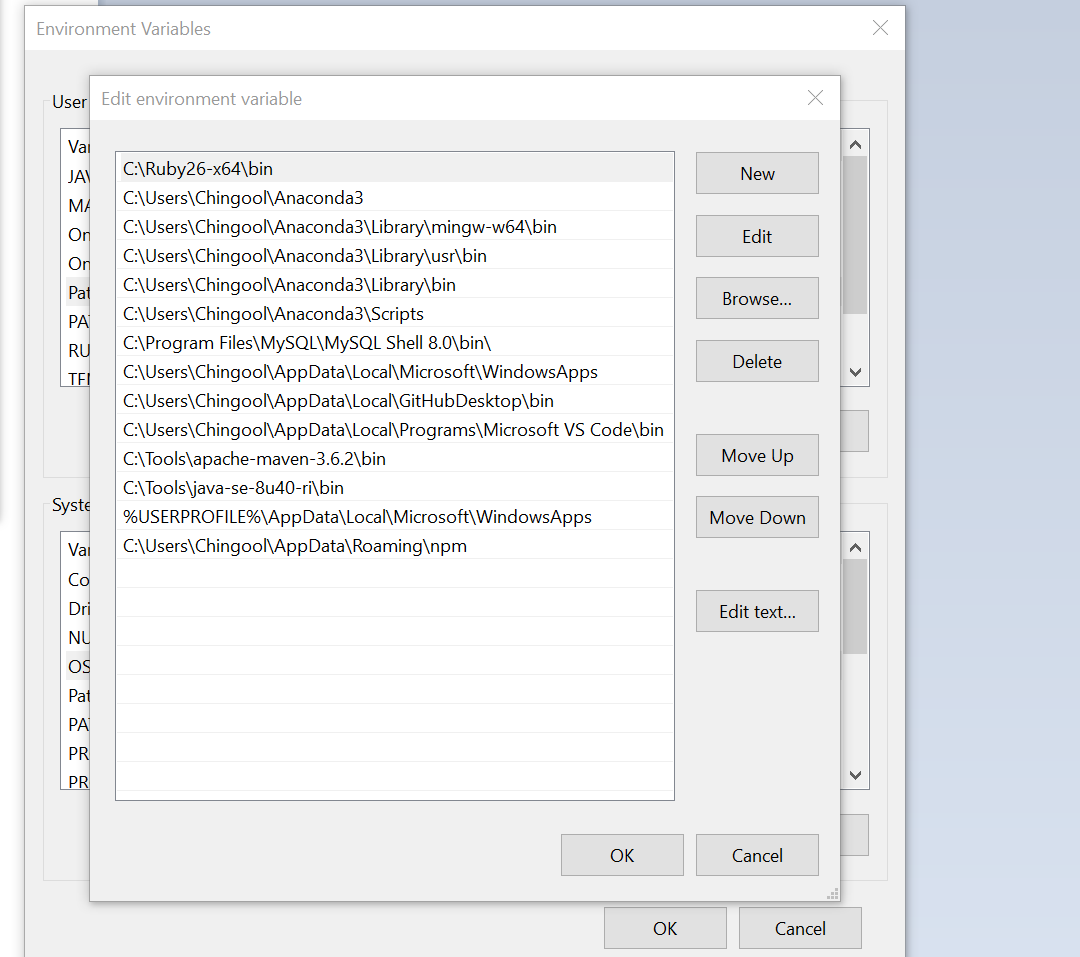


Figure : Python 3.7 setup