

**COMPUTER SUBJECT:** TENSORFLOW and KERAS

**TYPE:** GROUP WORK

**IDENTIFICATION:** Tensorflow Installation/MICL

**COPYRIGHT:** *Michael Claudius*

**LEVEL:** EASY IF it works !!!

**DURATION:** 10-30 minutes

**SIZE:** 10 clicks!!

**OBJECTIVE:** Installing Tensorflow and Keras

**REQUIREMENTS:** **Anaconda is installed**

**COMMANDS:**

## **IDENTIFICATION: Tensorflow Installation/MICL**

### The Mission

You are to install Tensorflow and Keras.

### Purpose

The purpose is to create an environment for Artificial Neural Network applications

### Installation of Tensorflow

There are several ways of skinning a cat and that's also the case when installing SW.

The web is filled up with mysterious suggestions using xxxxxx etc etc

Don't do that. You got Anaconda ! OR if this fails use "pip", as explained on the last page.

The first one given here is fast and simple. It falls in 3 steps:

- Start Anaconda
- Choose the *tensorflow*, *tensorflow-datasets* and *keras* package
- Import

And it takes 5 minutes. Instructions are given on next page.

### Useful links

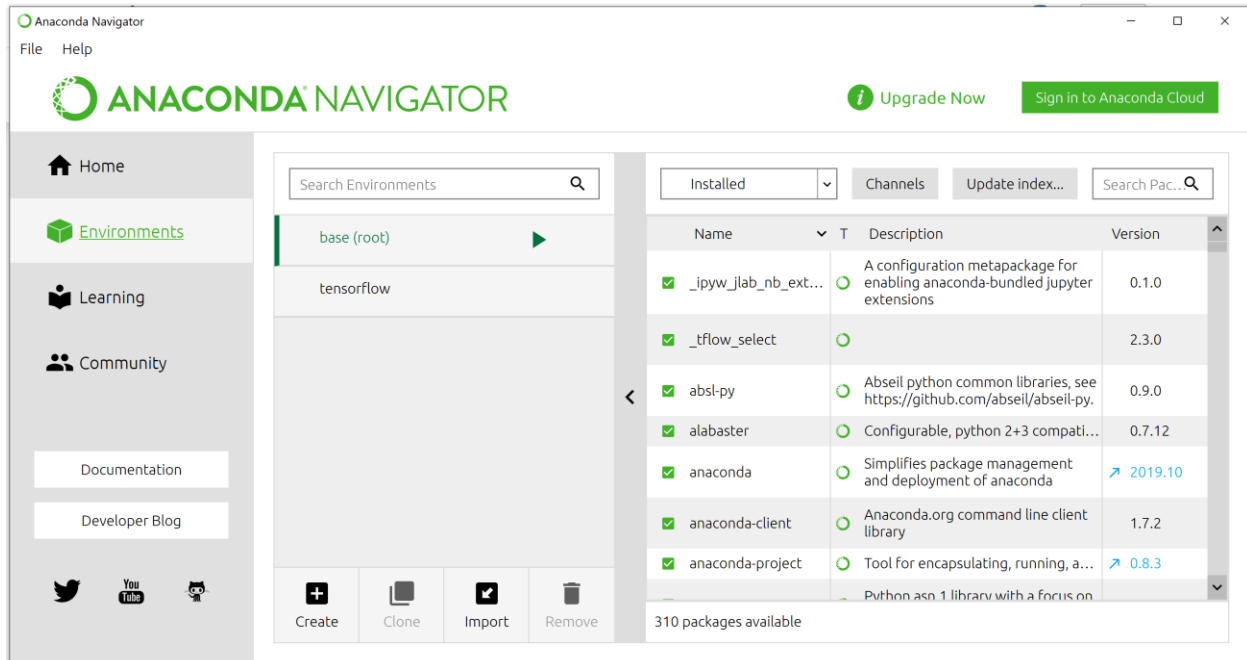
NONE

## Installation from Anaconda

Start Anaconda

Choose Anaconda Navigator

Click on Environments and you will see



There are 300+packages installed in base (root).

IF you were to work professional for months you would create a new working environment just for neural network. BUT we are not, yet 😊

So we will install in base (root) where all our other programs are installed.

Click on the *Environments* box

Click on the list box named *Installed* and Choose *Uninstalled*

Then search for tensorflow:

Tick 3 packages:

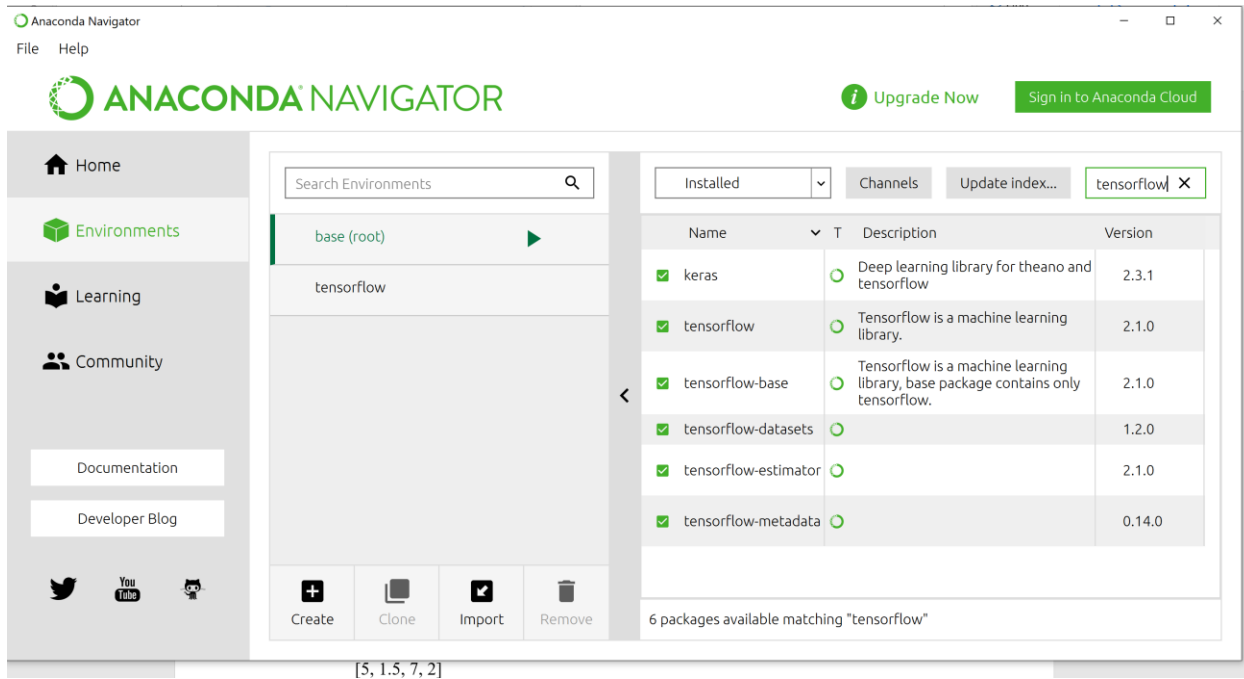
keras

tensorflow

tensorflow-datasets

Click *Import*

It takes some time, but finally you will see:



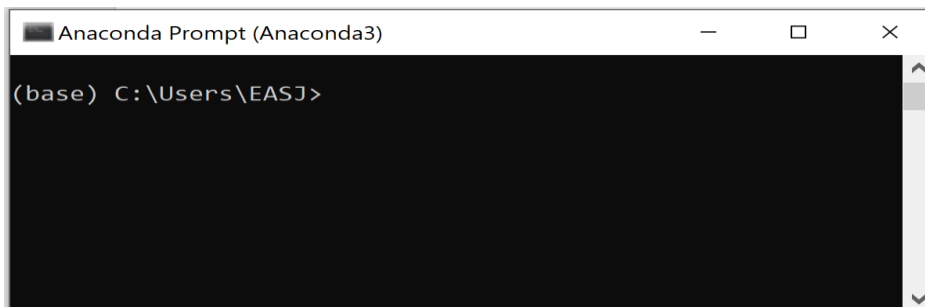
## DONE

*In the same way you can import pydot and graphviz, I don't feel you need that yet !*

## BUT

*IF it takes too long time (>10 minutes) OR if you cannot see/find tensorflow and keras in Anaconda Environments, there is a work around*

Click on the Windows Start menu and start the special Anaconda prompt,  
This opens a dos-prompt in the Anaconda base:



If you have another Anaconda base switch to that directory.  
Then in sequence type the following 3 commands one by one:

```
pip install tensorflow
pip install tensorflow-datasets
pip install keras
```

**It also takes some time but it worked for my students in 2020 !  
It will also work for you 😊**