Installation guide for Tensorflow in Raspberry Pi

Prerequisites: raspbian OS (latest version), python 3.x

1. First step is to install pip and Virtualenv for python 3 by running the the following commands in terminal:

```
$ sudo apt-get install python3-pip python3-div python-virtualenv
```

Virtualenv provides a safe environment to install Tensorflow and all necessary packages without affecting the packages in Raspbian OS.

2. Then create an virtual environment for python 3:

```
$ virtualenv --system-site-packages –p python3 <Directory Name>
```

3. Activate the virtual environment (Dir. Name = tensorflow):

```
$ source ~/tensorflow/bin/activate
```

After activating the virtual environment, the terminal should look like the following:

```
(tensorflow)$
```

4. Then install Tensorflow using following two commands:

```
$ sudo apt install libatlas-base-dev
$ pip3 install tensorflow
```

To test the the TensorFlow installation, open python in terminal and run the following script:

```
import tensorflow as tf
tf.enable_eager_execution()
hello = tf.constant('Hello, TensorFlow!')
print(hello)
```

If the installation is successful, the system should give the following output in the terminal:

```
Hello, TensorFlow!
```

To deactivate the Tensorflow Virtual environment, enter the following in the terminal:

```
$ deactivate
```

This should take you to the default terminal view.

Comment: You can always try to update existing packages before installing anything else by running the following commands:

```
$ sudo apt-get update
$ sudo apt-get upgrade
```