# Install TensorFlow with pip

<https://www.tensorflow.org/install/pip>

1. System wide (not recommended)

Check if your Python environment is already configured

python3 --version

pip3 --version

virtualenv --version

If not

Sudo apt-get install python3

Sudo apt-get install python3-pip

sudo apt install virtualenv

sudo apt update

sudo apt install python3-dev python3-pip

sudo pip3 install -U virtualenv # system-wide install

2. Create a virtual environment (recommended)

Python virtual environments are used to isolate package installation from the system.

Create a new virtual environment by choosing a Python interpreter and making a ./venv directory to hold it

virtualenv --system-site-packages -p python3 **./venv**

Activate the virtual environment using a shell-specific command

source **./venv**/bin/activate # sh, bash, ksh, or zsh

When virtualenv is active, your shell prompt is prefixed with (venv).

Install packages within a virtual environment without affecting the host system setup. Start by upgrading pip

pip install --upgrade pip

show packages installed within the virtual environment

pip list

Install the tensorflow pip package

Choose one of the following TensorFlow packages to install [from PyPI](https://pypi.org/project/tensorflow/):

* tensorflow —Current release for CPU-only *(recommended for beginners)*
* tensorflow-gpu —Current release with [GPU support](https://www.tensorflow.org/install/gpu) *(Ubuntu and Windows)*
* tf-nightly —Nightly build for CPU-only *(unstable)*
* tf-nightly-gpu —Nightly build with [GPU support](https://www.tensorflow.org/install/gpu) *(unstable, Ubuntu and Windows)*

pip install --upgrade tensorflow

Verify the installation

python -c "import tensorflow as tf; tf.enable\_eager\_execution(); print(tf.reduce\_sum(tf.random\_normal([1000, 1000])))"