



Set up your environment to take the TensorFlow Developer Certificate Exam

Questions? Email tensorflow-certificate-team@google.com.

Contents

[Before you begin](#)

[Install Python 3.7](#)

[Install PyCharm](#)

[Get your environment ready to take the exam](#)

[Windows and Linux Users: Check your GPU drivers](#)

[Mac Users: Ensure you have Python 3.7](#)

[All Users: Create a Test Virtual Environment that uses TensorFlow in PyCharm](#)

[Create a new PyCharm project](#)

[Install TensorFlow](#)

[Check the supported version of Python in PyCharm](#)

Confidential

Please do not share this document.

This document describes how to get your environment ready to take the TensorFlow Developer Certificate exam. It does not discuss what the exam is or how to take it. Please go to tensorflow.org/certificate for more information about the TensorFlow Developer Certificate program.

Before you begin

The TensorFlow certificate exam runs inside PyCharm.

You need to use TensorFlow 2.x.

You must use Python **3.7** to ensure accurate grading of your models.

Before you start the exam, make sure your environment is ready:

- Make sure you have Python 3.7 installed on your computer.
- Check that your system meets the installation requirements for PyCharm [here](#).
- Install the latest stable version of [PyCharm](#).
- Ensure that you have a stable internet connection before starting the exam.
- Make sure you are familiar with using PyCharm and that it is configured correctly.

See the section [Before you begin: Get your environment ready](#) further down this document for details on making sure that you have PyCharm ready and set up correctly for the exam.

Install Python 3.7

IMPORTANT! Make sure you have Python 3.7 installed on your machine before you start the exam. Although TensorFlow works with other versions of Python, there are some questions in the exam that will only run on the grading infrastructure if you compile your model with Python 3.7.

For step by steps instructions to updating Python on your workstation, see [Before you begin: Get your environment ready to take the exam](#) (further down in this document).

Install PyCharm

1. Check that your system meets the installation requirements for PyCharm [here](#).
2. Install the latest stable version of [PyCharm](#).

To make sure PyCharm is configured correctly, see [Before you begin: Get your environment ready to take the exam](#).

Get your environment ready to take the exam

Before you begin the exam, to mitigate any possible issues that you could encounter with the exam environment, we recommend following these steps. If you encounter any configuration issues when you start the exam, see the [General PyCharm Issues](#) section of the Troubleshooting section..

Windows and Linux Users: Check your GPU drivers

If you are a Windows user, and you have NVidia graphics cards installed, make sure your drivers work with the required version of TensorFlow (presently 2.0.0). We recommend you test out a system after following the steps here: <https://www.tensorflow.org/install/gpu>. See the instructions below for testing in a PyCharm virtual environment.

Mac Users: Ensure you have Python 3.7

The exam requires that you use Python 3.7, Macs ship with 2.7 as the default native interpreter, and PyCharm can get confused by this. Merely installing Python 3.7 is not enough. First ensure that Python 3.7 is properly installed, by typing 'python3' at the terminal. This command returns the version of Python 3 that is installed – makes sure it says Python 3.7.x.

If it isn't installed, go to <https://www.python.org/downloads/> to download a version of Python 3.7. Note that this is **not** the latest version. If you use homebrew make sure that you use it to install Python 3.7, and not the latest (which it will default to).

All Users: Create a Test Virtual Environment that uses TensorFlow in PyCharm

When you start the TensorFlow developer certificate exam, it will install TensorFlow for you. However, we strongly recommend that you practice using TensorFlow in PyCharm before you start the exam, so that you are familiar with the environment that you will work in while taking the exam, and also to mitigate any configuration issues.

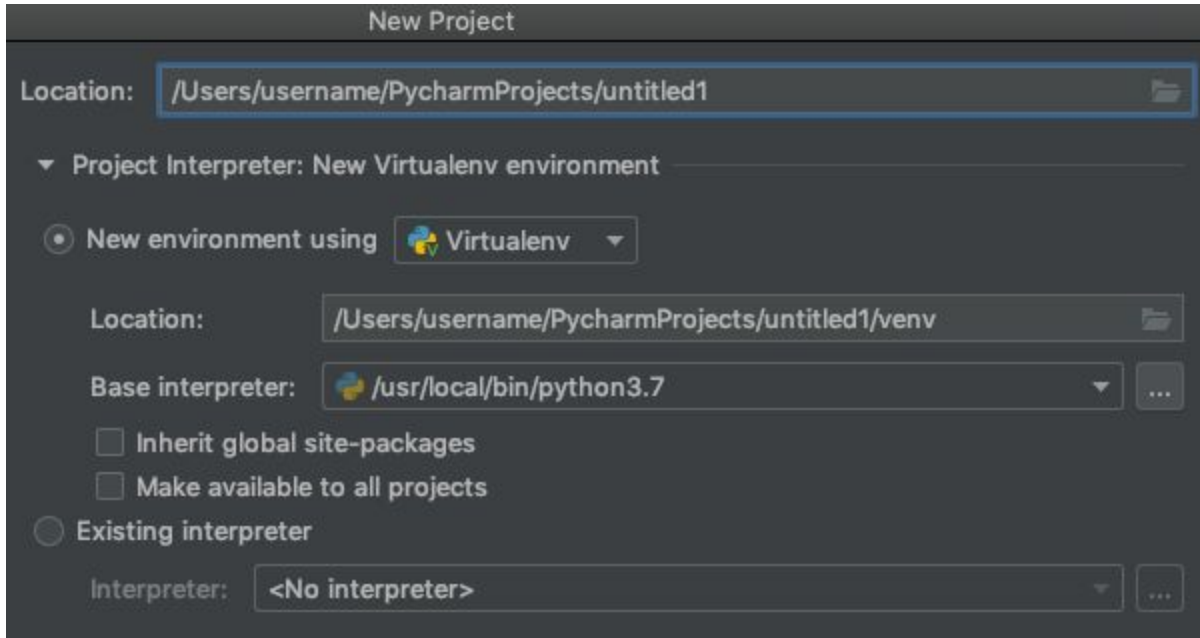
There are many varied computers with different operating systems, GPUs, and other dependencies. It's **strongly recommended** that you follow these steps to ensure that you have a well-configured PyCharm environment that TensorFlow works on before starting the exam.

This will help you ensure that you have the right Python environment, that your GPU drivers work correctly, and that you are able to install the required dependencies.

Create a new PyCharm project

To do this, open PyCharm and start a new project in PyCharm. Call it TFEExams (or whatever you like).

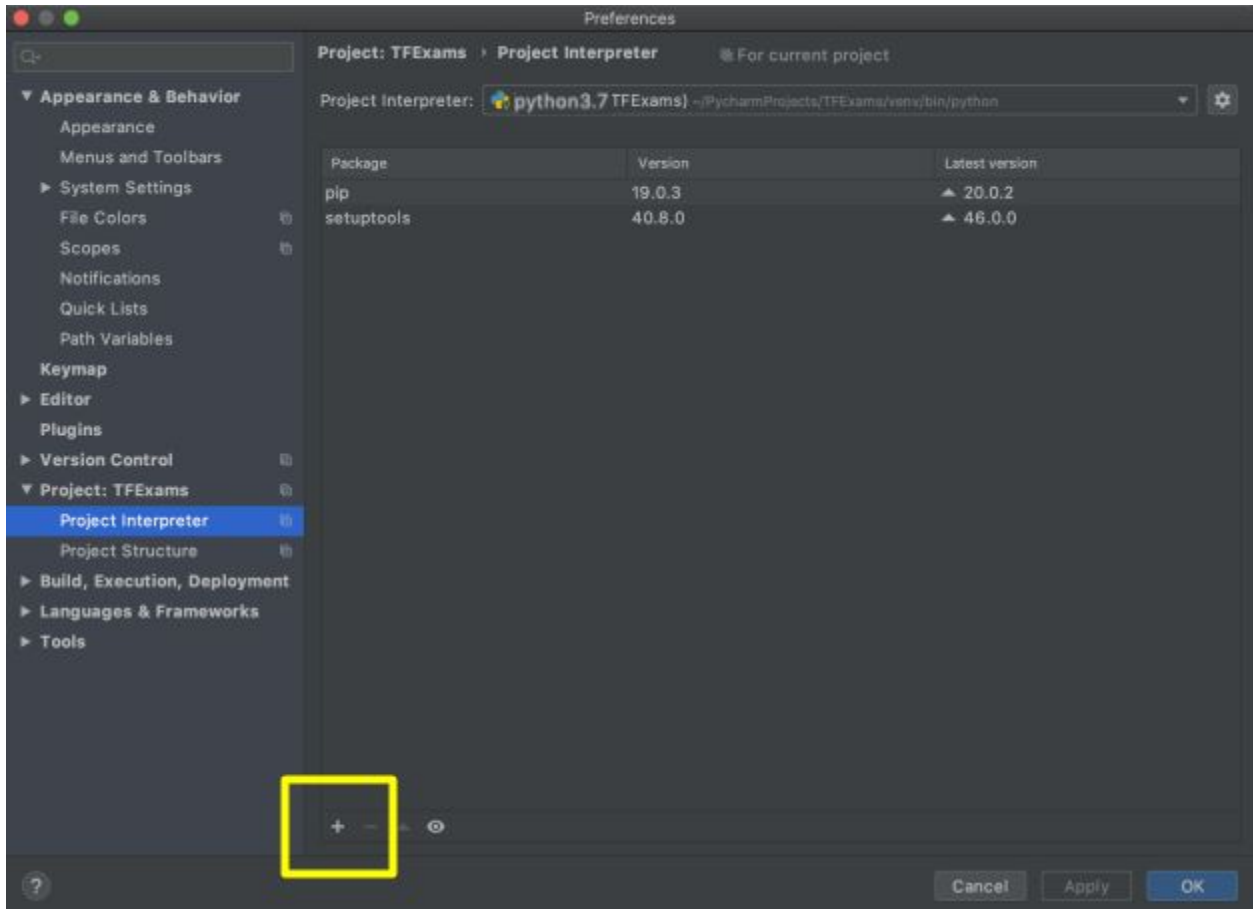
When asked for the Project Interpreter, select 'New Virtualenv Environment' as shown here. **Make sure that the Base Interpreter is Python 3.7.**



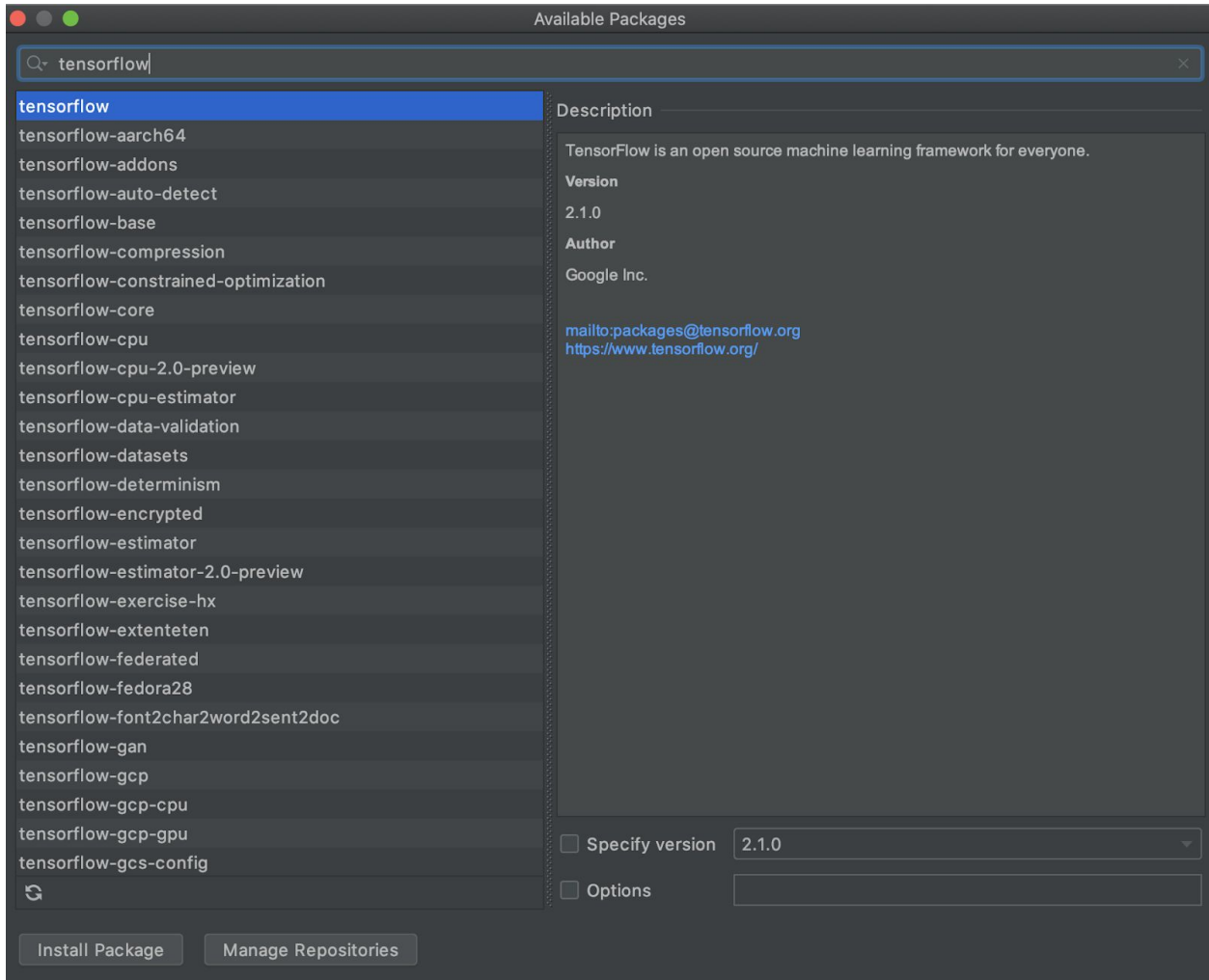
If it is a Python 3.7 (as shown in the screenshot above), click Create. **If it isn't, exit PyCharm, and install Python 3.7 on your machine and then try this step again. In particular, if you are a Mac user check the section above.**

If you were able to create the environment, open the PyCharm preferences dialog. (Windows and Linux: File->Settings. On Mac it is PyCharm->Preferences)

Choose the Project, and then Project Interpreter as shown here:



Press the '+' button. It's at the bottom of the screenshot above, but in some cases it might be on the right hand side. This will open the 'Available Packages' window, with details on packages that you can install. Search for "Tensorflow" :



Install TensorFlow

To install Tensorflow, click the 'Install Package' link at the bottom. Repeat this process for the following packages:

- Tensorflow
- Numpy
- Urllib3
- Pillow
- tensorflow-datasets

You will now have a working environment with all the dependencies required for the exam. You can test the environment with some simple Python and TensorFlow code to be sure.

If you are a Windows or Linux GPU user, a simple Python script you can try is:

```
import tensorflow as tf
print(tf.__version__)
```

If your drivers are configured correctly, this script will execute. If not, check your driver dependencies, and the dependencies listed at: <https://www.tensorflow.org/install>

Check the supported version of Python in PyCharm

If you aren't sure what version of Python is being used in your PyCharm environment, go to the 'Python Console' window in PyCharm, which will usually be a tab at the bottom of your screen, and type

```
print(sys.version)
```

The terminal will report back the Python version as shown here:

```
PyDev console:
>>>print (sys.version)
3.7.4 (v3.7.4:e09359112e, Jul 8 2019, 14:54:52)
[Clang 6.0 (clang-600.0.57)]

>>>
```

Take the exam

This document does not cover how to take the exam. Please go to [tensorflow.org/certificate](https://www.tensorflow.org/certificate) for more information about the TensorFlow Developer Certificate program.