



# Instructions for taking the TensorFlow Developer Certificate Exam

Questions? Email [tensorflow-certificate-support@google.com](mailto:tensorflow-certificate-support@google.com)

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## Confidential

Please do not share this document. Do not discuss anything mentioned in this document with anyone. Do not discuss the plugin with anyone.

Thank you for helping maintain the integrity of the TensorFlow Developer Certificate exam.

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Read these instructions carefully before you start the TensorFlow Developer Certificate exam. We recommend you keep these instructions open in a web browser while taking the exam for easy reference.

## Before you begin

These instructions are for people who have purchased the TensorFlow Developer Certificate exam. If you need to purchase the exam, see [tensorflow.org/certificate](https://tensorflow.org/certificate) for information.

The TensorFlow certificate exam runs inside PyCharm.

You must use Python **3.8** to ensure accurate grading of your models.

After you start the exam, you have five hours to finish.

Before you begin:

- Respect the integrity of the exam
- Make sure you have the knowledge to take the exam
- Understand the refund policy

- Get your environment ready
- Understand the PyCharm restrictions

## Respect the integrity of the exam

Respect the integrity and seriousness of this exam, it must be all your own work, without help from anybody else.

**During the exam**, take the exam on your own, it must be completely your own work.

**After the exam**, don't discuss the content of the exam with other people.

If we discover anybody has violated these requirements, their certificate will be revoked and they could be banned from all future Google certification exams.

## Make sure you have the knowledge to take the exam

- Check the skills checklist to ensure that you have the necessary knowledge to complete the exam. The checklist is published in the [candidate handbook](#) at <https://www.tensorflow.org/certificate>.

## Understand the refund policy

Once you start the exam, we cannot give a refund or retake for **any reason**.

See the Refund Policy section in [Set up your environment to take the TensorFlow Developer Certificate](#).

Also note that after you purchase the TensorFlow Developer Certificate exam, you must complete the exam within 6 months of the date of purchase. It is your responsibility to take the exam before your exam registration expires. We cannot give refunds for expired exam purchases.

## Get your environment ready

- Make sure you have Python 3.8 installed on your computer.
  - **Don't** use Anaconda.
- Check that your system meets the installation requirements for PyCharm [here](#).
- Install [PyCharm 2021.x](#):
  - You can use either PyCharm Professional or PyCharm Community Edition.

- **Don't** use the Anaconda plugin..
- 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.

**IMPORTANT!** Your Python environment must be installed from canonical Python packages available at [python.org](https://python.org). We cannot be responsible for errors in your submissions due to self-built or non-canonical Python environments.

## **IMPORTANT!**

See the document [Set up your environment to take the TensorFlow Developer Certificate](#) for details on making sure that you have Python and PyCharm ready and all set up correctly for the exam.

## **Test your environment before you take the exam**

Before you begin the exam, to mitigate any possible issues that you could encounter with the exam environment, create a PyCharm project, load the same libraries that you will need in the exam, and practice training models in PyCharm. See the document [Set up your environment to take the TensorFlow Developer Certificate](#) for details.

If you are unable to complete the exam after you start it because of issues with your computer environment, versions of Python, problems installing TensorFlow, or other similar problems, we cannot give you a retake or a refund.

## **Understand PyCharm restrictions for the exam**

To help ensure that the TensorFlow Developer certificate exam plugin does not experience conflicts, please abide by these restrictions:

Before you start:

- [Make sure you have installed the latest version of PyCharm.](#)
- [Make sure that PyCharm isn't subject to file loading controls](#)
- [Disable other plugins in PyCharm](#)

During the exam:

- [Don't open another project in PyCharm](#)
- [Don't upgrade the version of PyCharm](#)

**Before you start:**

**Make sure you have installed the correct version of PyCharm.**

The plugin for the TensorFlow Developer Certificate exam is only available in the version of PyCharm listed above in the section [Get your environment ready](#). If you use a different version of PyCharm, you will not be able to find the plugin in the marketplace.

**Make sure that PyCharm isn't subject to file-loading controls**

The TensorFlow Developer certificate exam plugin needs to load files. Make sure that the software or computer that you plan to use to access PyCharm isn't subject to any controls that could block the loading of files. This advice is relevant, for example, if you plan to use a Windows server administered by your company which might have restrictions on what files can be loaded through the server.

**Disable other plugins**

Disable all other plugins in PyCharm.

## **While you are taking the exam:**

### **Don't open another project in PyCharm while you take the exam**

While taking the TensorFlow Developer certificate exam, don't open another project in PyCharm. You must work only in the project that the exam plugin creates for you.

### **Don't upgrade the version of PyCharm while you take the exam**

While you are taking the exam, don't upgrade the instance of PyCharm that you are using for the exam.

### **Don't install or enable any other plugins in PyCharm while you take the exam**

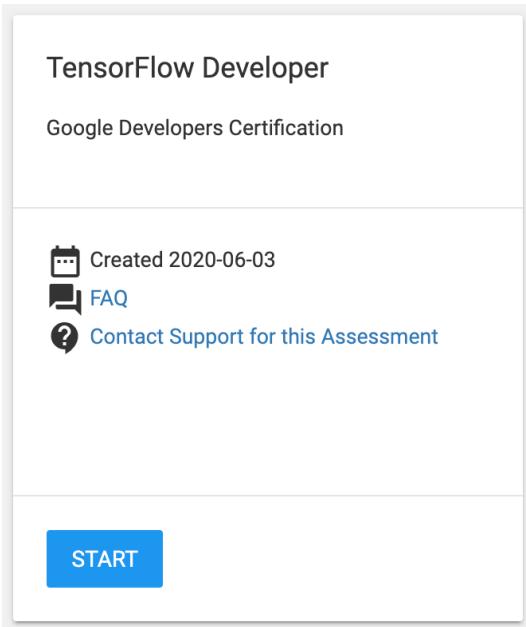
While you are taking the exam, don't install or enable any other plugins in PyCharm.

## **Start the Exam in your TrueAbility Portal**

The first step in starting the exam is to press the Start Exam button on your TrueAbility portal. When you press the Start Exam button, the exam infrastructure prepares your exam.

1. Go to your TrueAbility portal, and make sure to sign in with the same email that you used to purchase the exam. You will see the entry for the TensorFlow Developer exam

like this:



2. Press the Start button to prepare your exam. You will see a page that says your exam is ready, like this:

A screenshot of a web page titled "TensorFlow Developer". The main content area displays the message "Your Exam is Ready". Below it, a section titled "Before you begin" contains two bullet points:

- Please note that you have 6 months from the date of purchasing the exam or redeeming your invitation code to take the exam before your purchase expires.
- Check that your system meets the installation requirements for PyCharm [here](#).

3. When you are ready to take the exam, open PyCharm and install the TensorFlow Exam Plugin.

# Install the plugin for the exam

Before you can take the exam in PyCharm, you need to install the plugin that contains the exam.

After you install the plugin, you can choose when to start the exam. Installing the plugin doesn't trigger starting the exam.

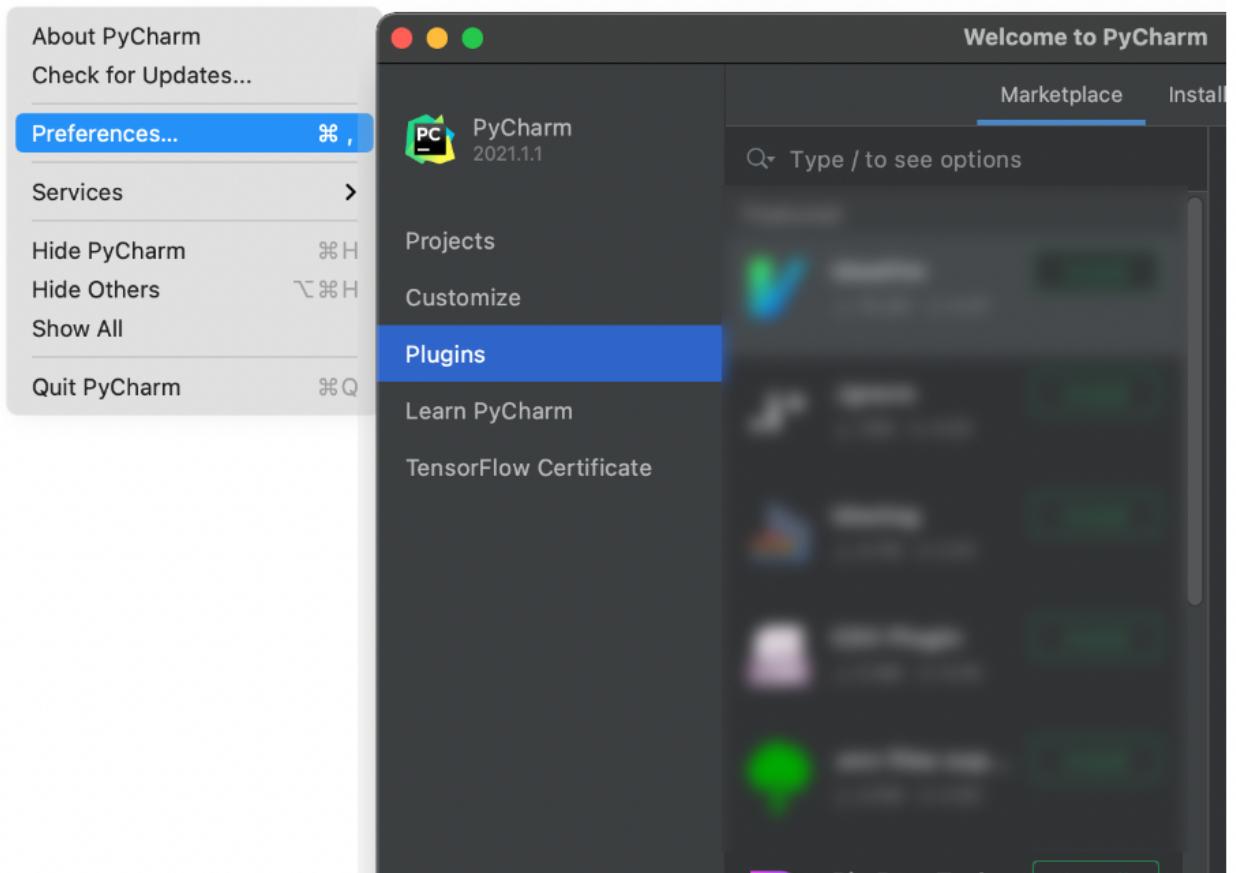
**Note:** If you previously took the exam and already have the plugin installed in PyCharm you must uninstall it first. See the section [Uninstall the plugin \(when retaking the exam\)](#) for details.

See <https://www.jetbrains.com/help/idea/managing-plugins.html> for more information on JetBrains plugins in general.

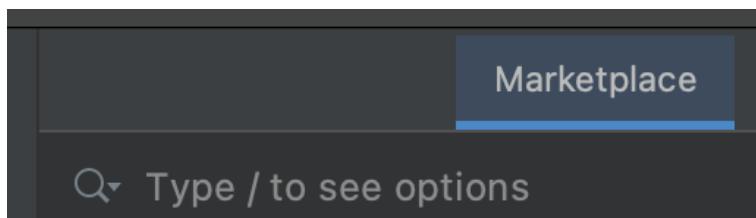
Here are specific instructions for installing the TensorFlow developer certificate exam plugin:

1. Open PyCharm.

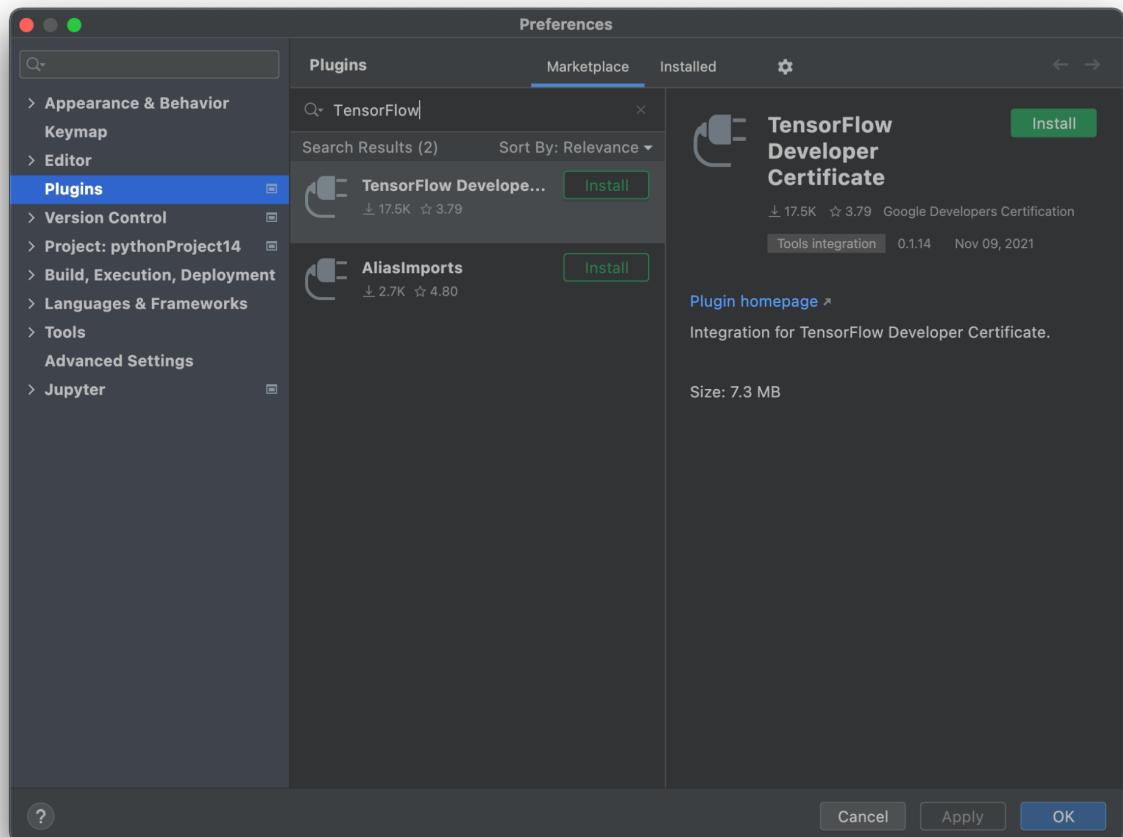
2. Go to **PyCharm > Preferences > Plugins**.



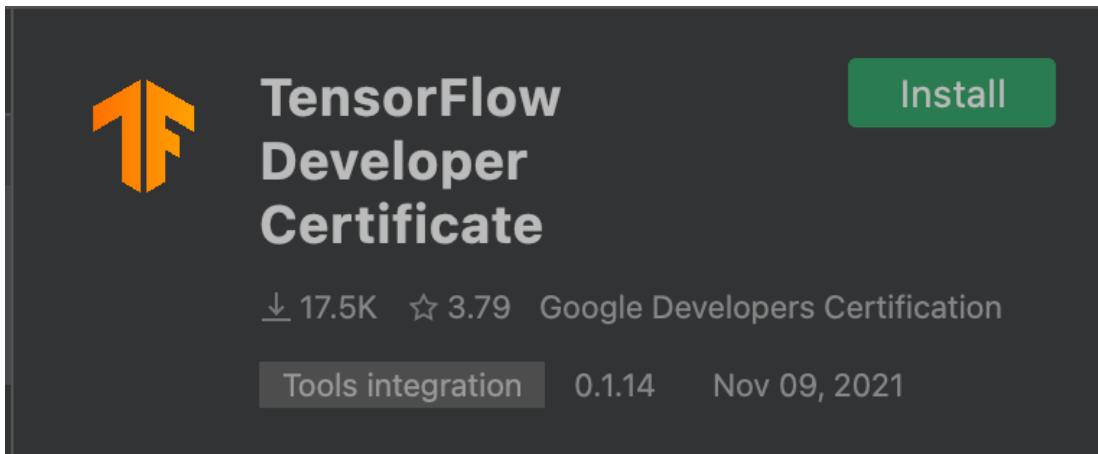
3. Select the **Marketplace** tab.



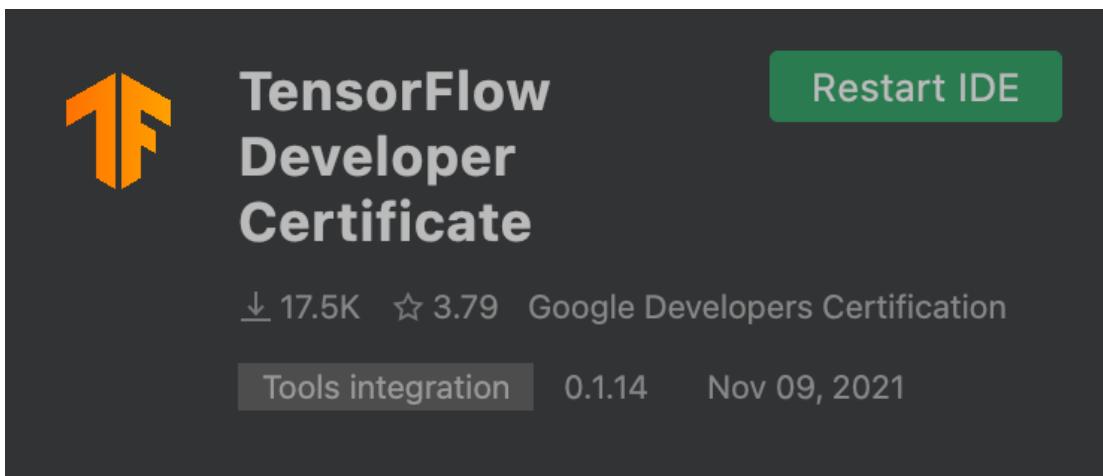
4. Search for TensorFlow Developer Certificate.



5. Click the green install button, on the top right.



6. Then restart the IDE when prompted.



Note: If PyCharm does not prompt you to restart it, go ahead and restart anyway.

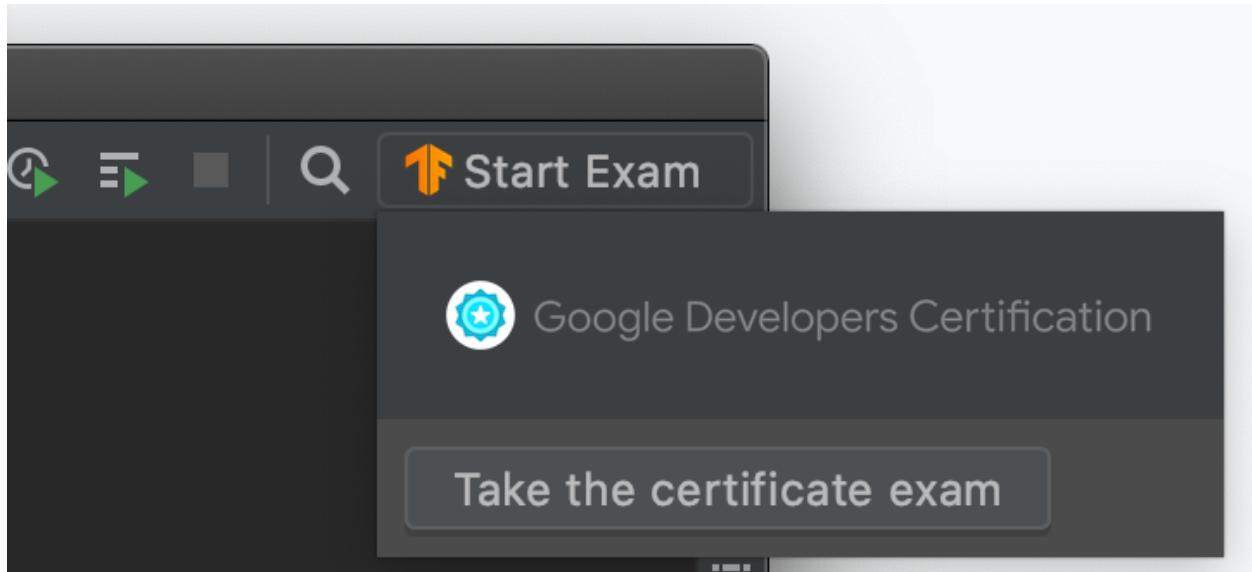
# Start the exam in PyCharm

After you have installed the TensorFlow Developer Certificate plugin in PyCharm, you can take the exam in PyCharm.

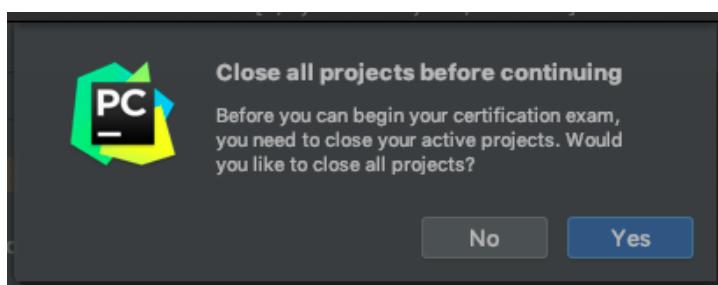
You can start the exam either from the Welcome screen or from the **Start exam** option at the top right of the project window (if you have a project open).

## Start the exam if you have a project open

1. Select the **TF Start Exam** option at the top right of the project window:



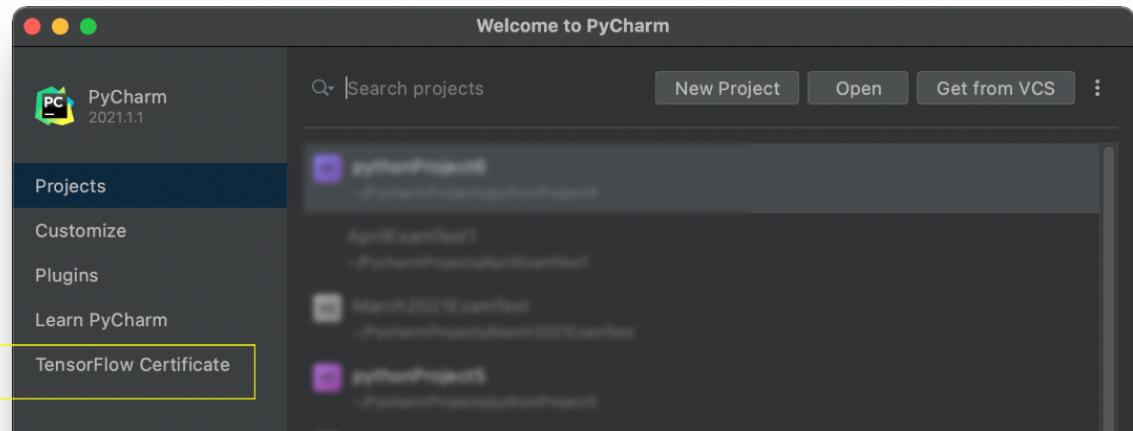
2. Select **Take the certificate exam**.
3. PyCharm will ask you to agree to closing your project window:



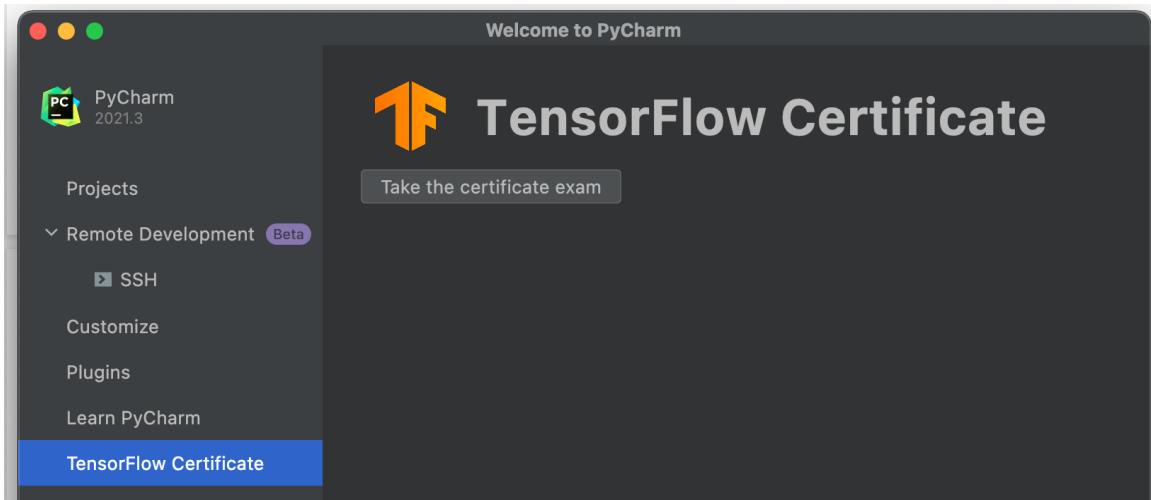
4. To continue, see the instructions below in [Accept the Terms and Conditions](#)

## Start the exam if you don't have a project open

1. Open PyCharm. You will see the Welcome Screen.

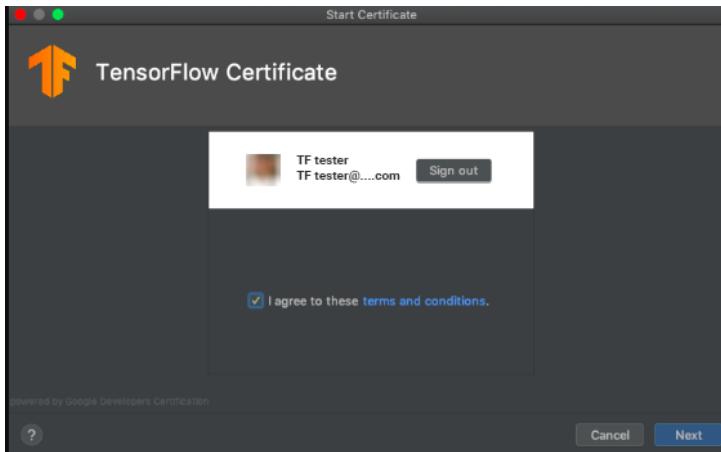


2. Choose **TensorFlow Certificate**.



## Accept the Terms and Conditions

1. Accept the terms and conditions in the next dialog box.

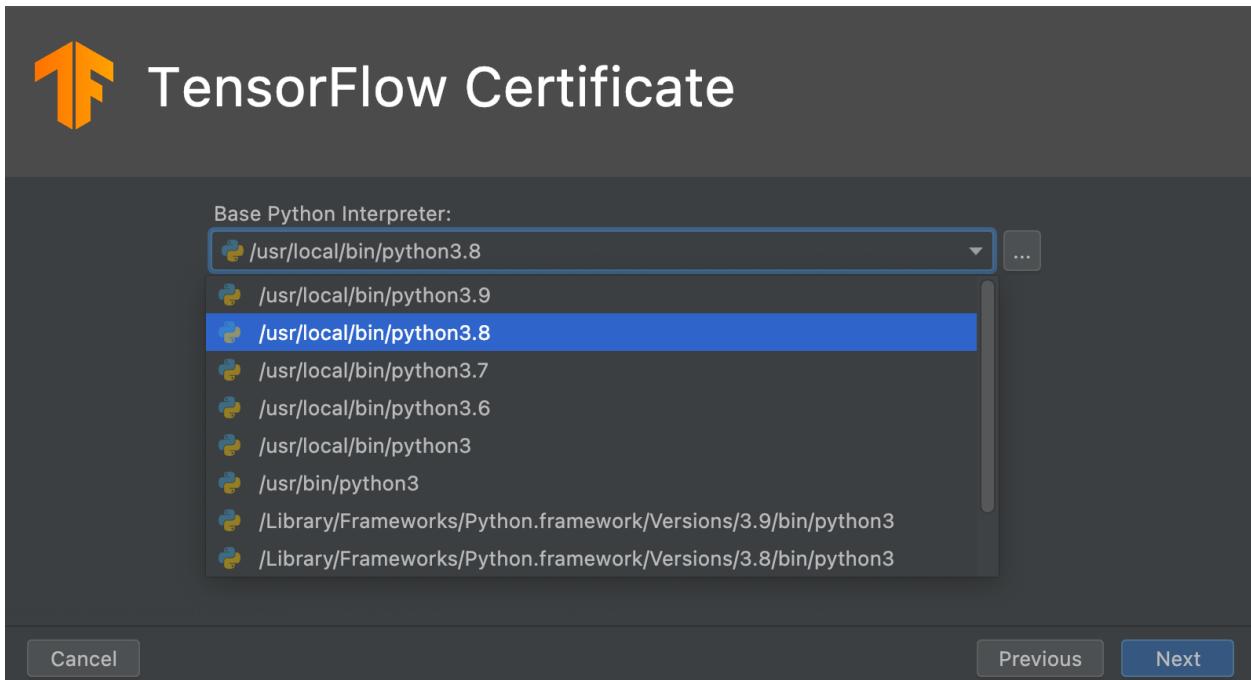


2. You will see a page on your web browser saying that you have successfully signed in. There's nothing for you to do on that page, just go back to PyCharm.

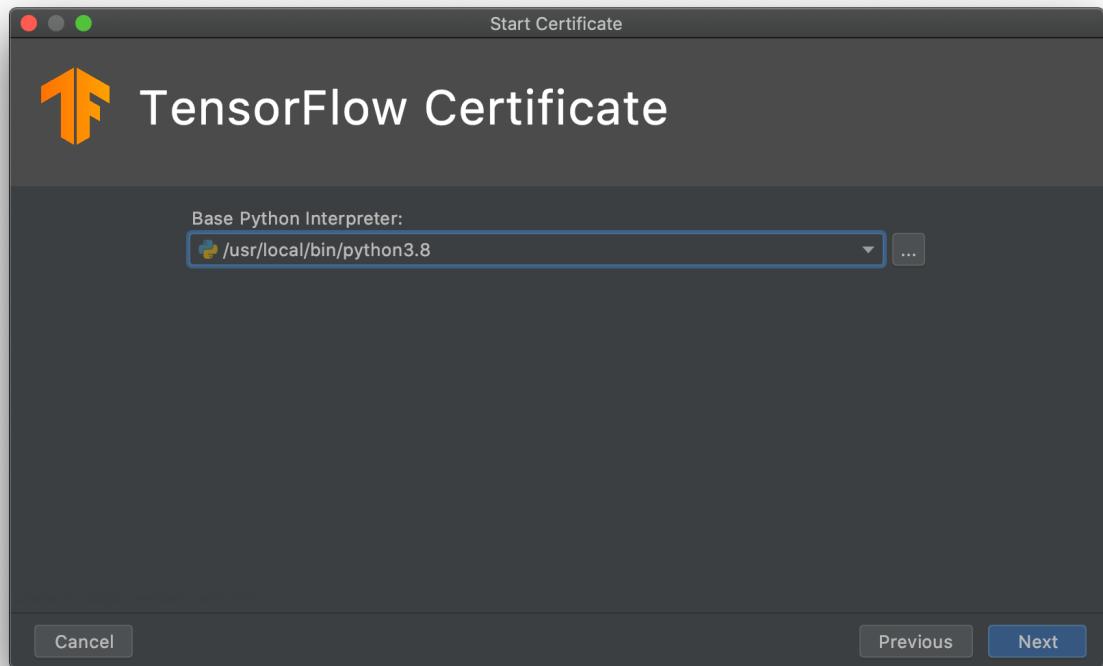


## Select interpreter and install requirements

1. In PyCharm, carefully read and respond to any further dialog boxes that appear until you see the dialog box for selecting an interpreter.

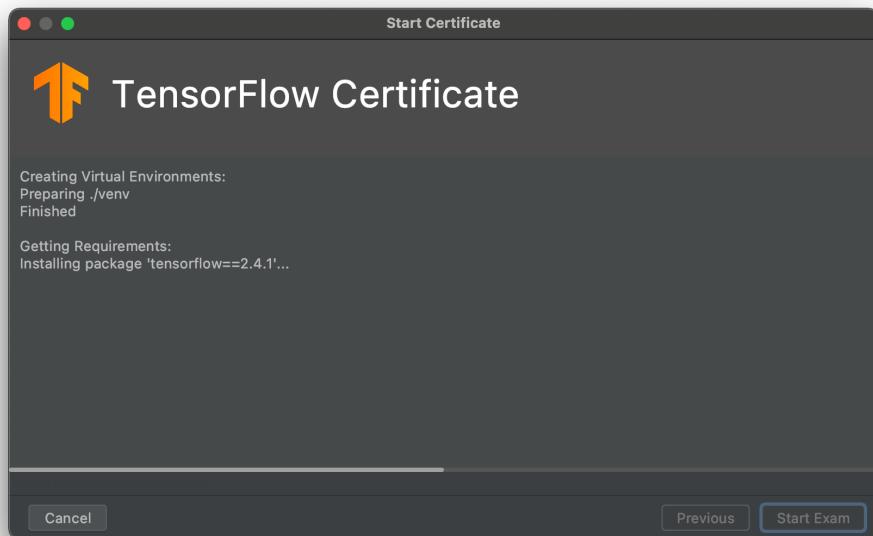


2. Choose Python 3.8. (**Make sure you select Python 3.8, it might not be the default on your computer.**)

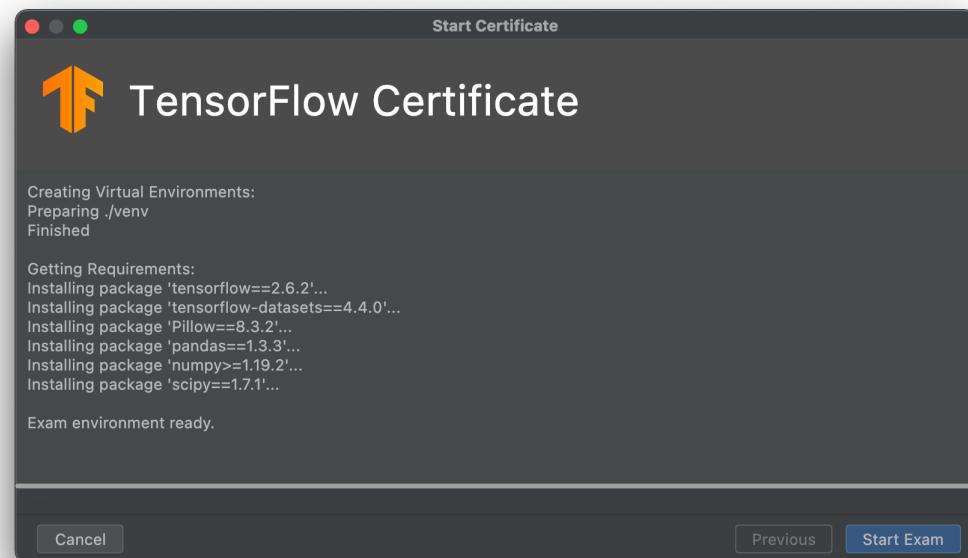


**Note:** make sure you have Python **3.8** installed. The grading infrastructure uses Python 3.8. To ensure that your models run on the grading infrastructure, you must compile and train them in Python 3.8.

3. If any plugins that are not allowed are enabled, the TensorFlow Developer Certificate exam will detect them. You will be required to disable them and restart PyCharm in order to proceed with the exam.
4. Step through the wizards as the interpreter and the requirements are installed. (Be patient.)



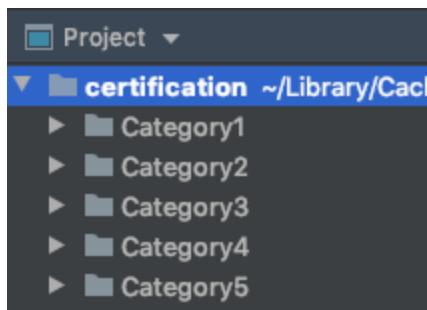
- When everything is ready, you will see a **Start Exam** button. If you are sure you are ready, start the exam.



**WARNING!** After you start the exam you will have five hours to complete it. If you're not ready to start the exam, then don't press the **Start Exam** button.

## The exam project opens

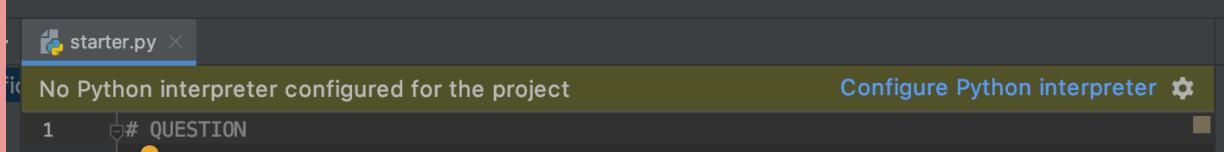
After you install the plugin and choose **Start Exam**, the project containing your exam opens.



You will see five folders, each one contains a `starter.py` file that contains the starter code for that category of question.

You will need to complete the code in each of the `starter.py` files.

**Note:** On some machines there is a bug where the process of setting up the exam environment doesn't set up the Python interpreter correctly and you see a message "No Python interpreter configured for the project":

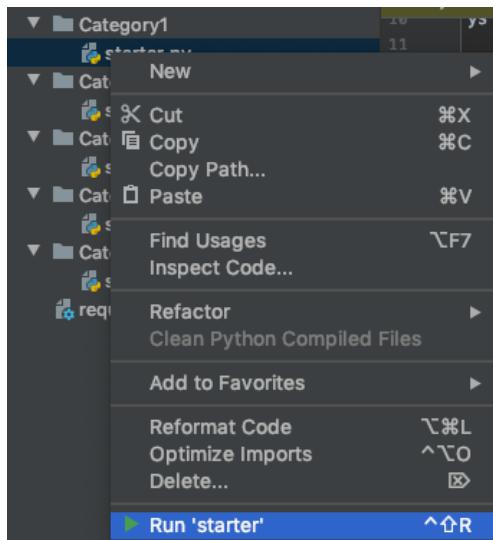


See the section [You see 'No Python Interpreter Configured for this Project' when you start the exam](#) in the Troubleshooting section for information on how to fix this.

# Run your code

You can run your code at any time as follows:

1. Select the file in the project list, right click and choose **Run 'starter.'**



The run window at the bottom of the screen pops open to display any output from your program.

```
Run:  starter ×
/run.sh: line 1: /Users/joelyn/Library/Caches/Pycharm2019.3/certification/venv/bin/python: No such file or directory
2020-02-12 17:24:16.162425: I tensorflow/core/platform/cpu_feature_guard.cc:162] CPU features available: SSE2,SSE3,SSE4_1,SSE4_2,SSE4_3,AVX,AVX2,FMA
2020-02-12 17:24:16.195370: I tensorflow/compiler/xla/service/service.cc:16] XLA service 1.15 starting up
2020-02-12 17:24:16.195384: I tensorflow/compiler/xla/service/service.cc:17] XLA service 1.15 started
Train on 6 samples
6/6 [=====] - 0s 59ms/sample - loss: 37.9886
[[-6.966216]]
[[-14.001883]]

Process finished with exit code 0
```

A screenshot of the PyCharm Run window. The window title is 'Run: starter ×'. It displays the command '/run.sh' followed by several log entries from the 'starter' program. The log entries show TensorFlow initialization, XLA service startup, training statistics, and a final process finish message. At the bottom of the window, there are tabs for 'Terminal', 'Python Console', 'Run' (which is selected), and 'TODO'.

# Write the code for the exam

After you install the plugin and choose **Start Exam**, the project containing your exam opens. You will see five folders. Each one contains a starter.py file that contains the starter code for that category of question.

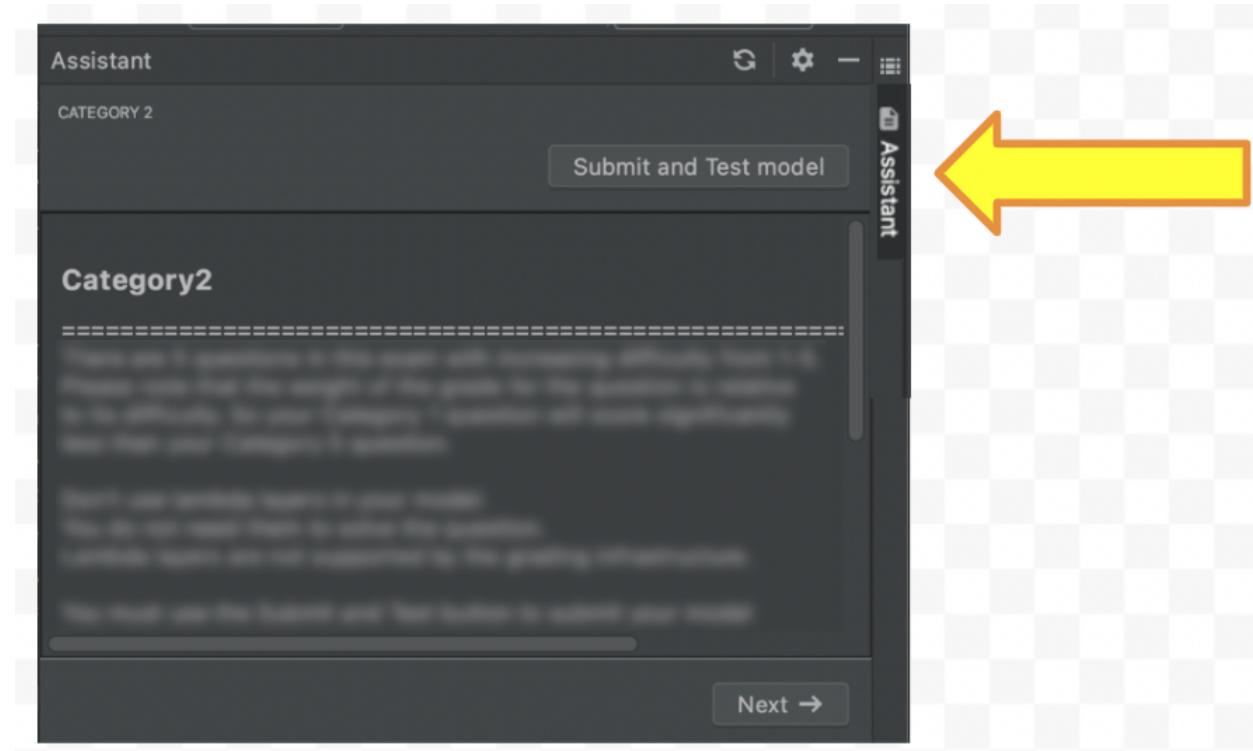
You will need to complete the code in each of the starter.py files.

You need to complete the starter code for all five categories within the allotted time. You must test and submit your models as you go (see details below).

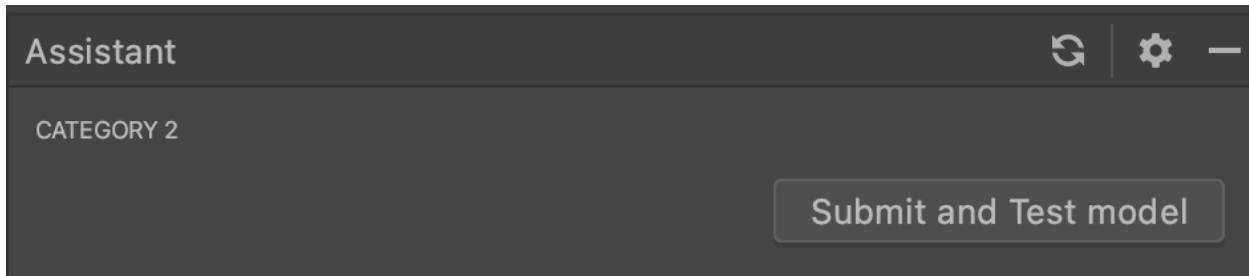
## View instructions

Each starter file has instructions explaining what you need to do for that category.

The instructions are displayed in the Assistant panel. To view or hide the instructions, use the vertical **Assistant** tab on the right.



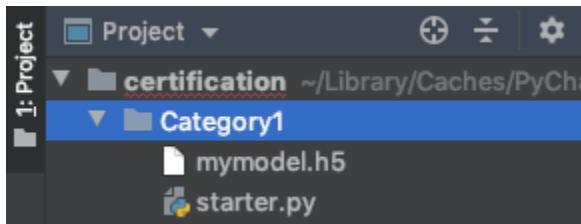
When the Assistant panel is open, the **Submit and Test model** button is displayed at the top of the Assistant panel.



## Save your model

You will need to make sure each starter file includes the code to save your model as a .h5 file.

When you save the model, it doesn't matter what the filename is, but it must have the .h5 extension.



## Don't use lambda layers in your model

Don't use lambda layers in your models in any of the categories. None of the models require lambda layers to pass the tests. Lambda layers are not supported on the grading infrastructure.

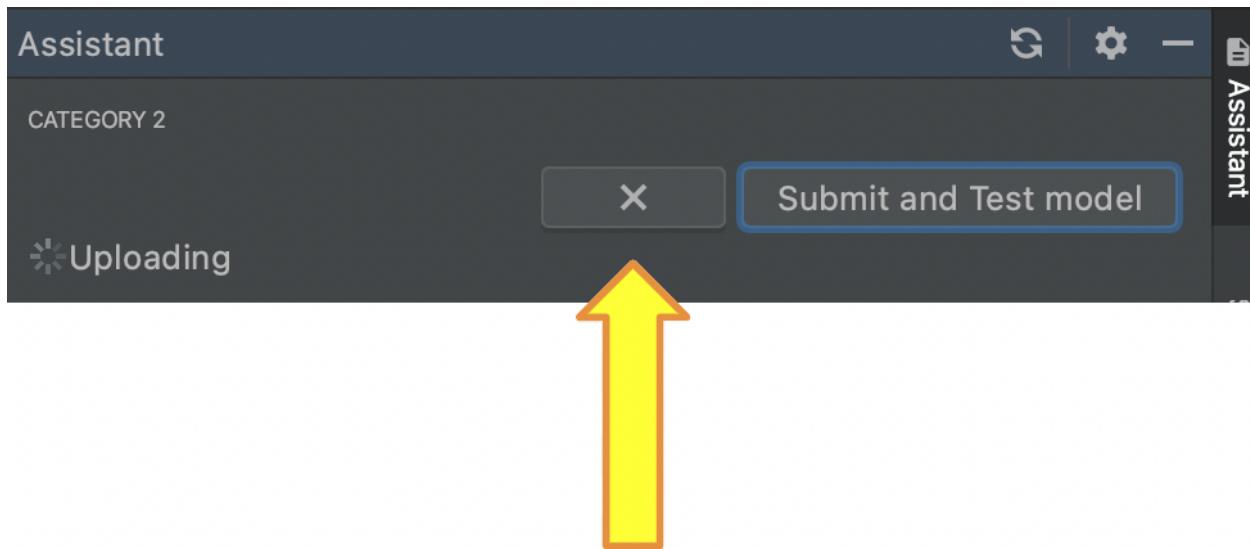
## The saved model must be a reasonable size

It is expected that you will code your model so that it uses a reasonable amount of memory when it is run, and that the file size of the saved model is reasonable for the problem being solved.

Model files that are too large or need too much memory might fail to complete the upload process or, even if they upload successfully, might fail to complete the evaluation process. If

you find yourself waiting for a while for a response after pressing the Submit and Test button, it's likely that your file is too large.

You can cancel the Submit and Test action while it is in progress by pressing the "X" to the left of the button:



We cannot provide exact limits on file size, but if your model has been coded efficiently, it should successfully upload and be evaluated.

## Train on validation as well as training data

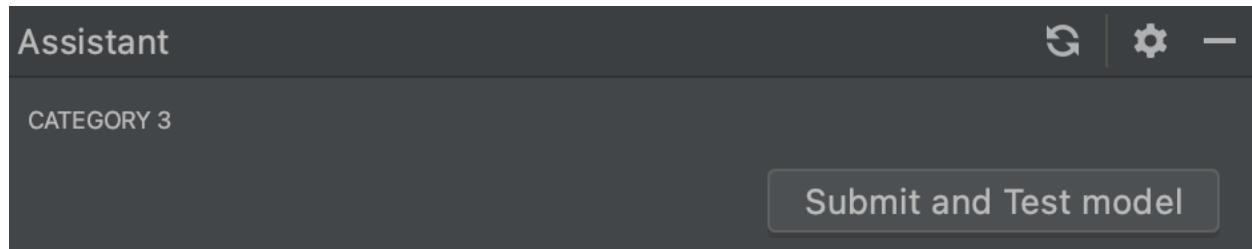
When you submit your model for testing, the grading system uses your model to make predictions using randomly selected values from a validation dataset.

For the highest marks you should have a model that trains to a high degree of accuracy on both a test set and a validation set. Overfitting towards the training set might impact your model's ability to score highly on our tests. So, for example, if your model is 99% accurate on a training set, but only 60% accurate on a validation set, it's likely to score 3 out of 5 or less on our tests.

A successful model engineer knows how to create models with high accuracy that do not overfit heavily to training data, and this is one of the valuable skills that is tested in all scenarios.

# Test your models

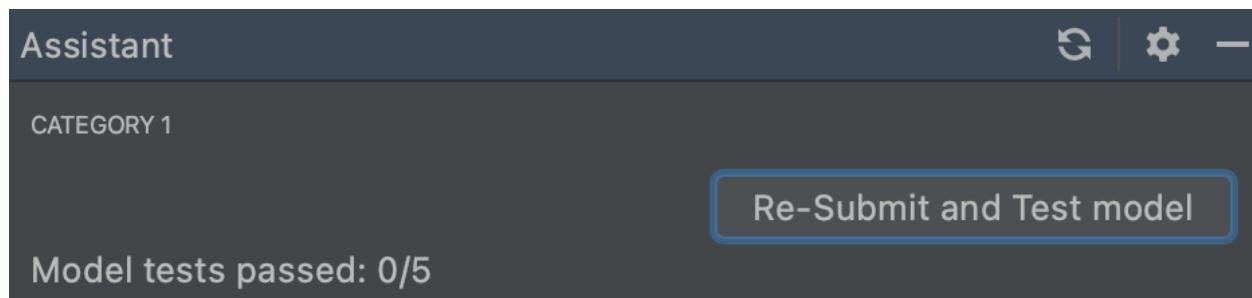
After you have saved the model in a category, you can submit it for testing by pressing the **Submit and Test model** button in the Assistant Panel. (You cannot submit and test the model if it has not been saved.)



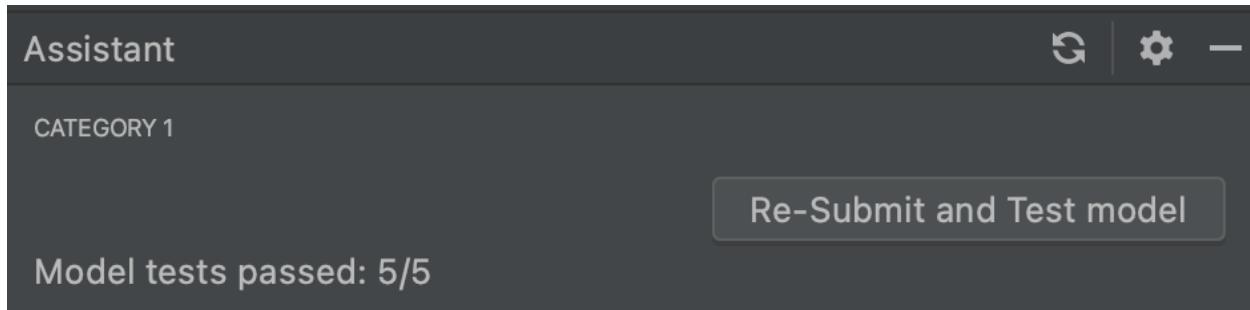
When you are ready to Submit and Test your model, make sure that the Assistant panel is open so that you can see the button. (See [View instructions](#) for details on how to open the Assistant panel.)

When you press the **Submit and Test model** button, the plugin sends your saved model file to the grading infrastructure across the internet. The grading infrastructure runs your model against randomly selected values from the validation dataset and reports the results back to the plugin.

You see the results of the tests below the button in the Assistant panel . For example, this model needs more work, it passed 0/5 tests:

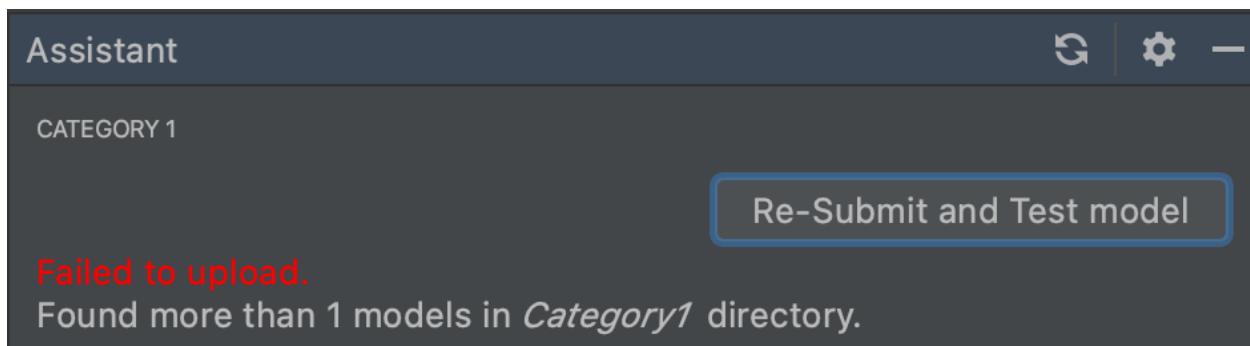


This model is looking good, it passed 5/5 tests:



You can update your code and press the **Submit and Test model** button as many times as you like (within the time limits of the exam).

If you have more than one saved model in a category, then when you press **Submit and Test model**, you will get an error such as "more than one model found." You will need to delete the extra models before you can Submit and Test the model again.

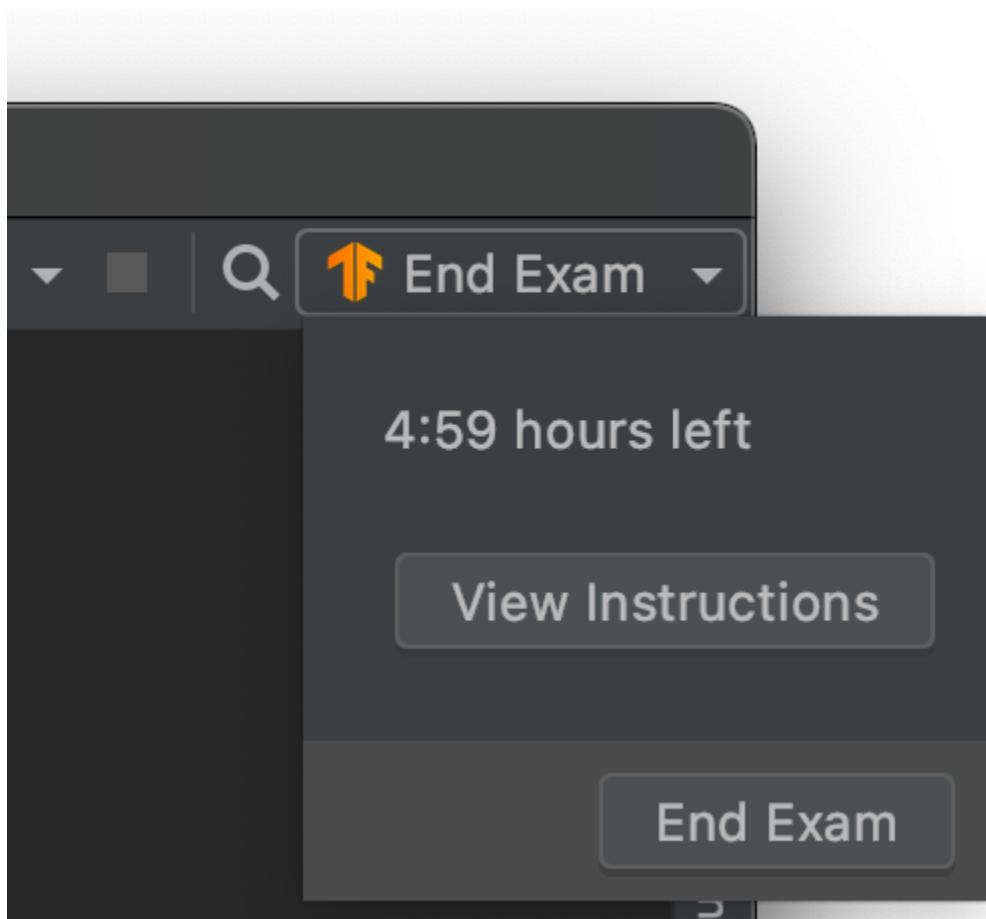


When you finally end the exam, the latest version of each model that you tested using the **Submit and Test Model** button will be submitted to the backend grading system. If you did not submit a model in any category, ***you will score zero for that category.***

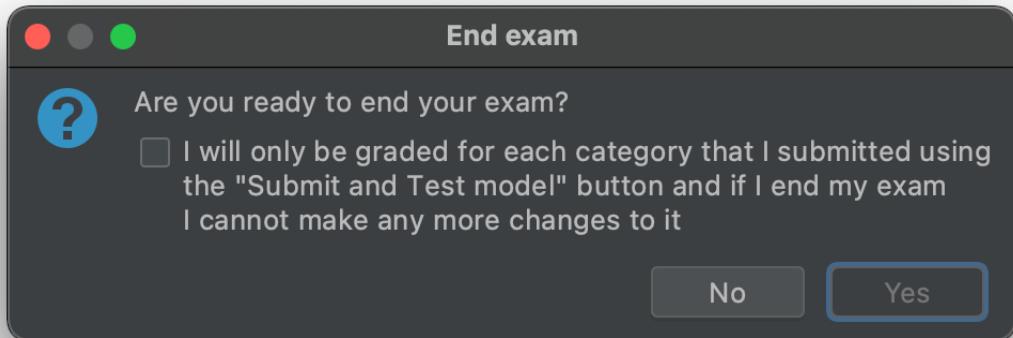
**If a model fails to upload and test, you will score zero for that category, even if you previously submitted and tested successfully in that category.** So make sure that you have submitted and tested a model in every category, without getting errors during the submit and test process, before you end the exam.

# End your exam

When you are ready to submit your exam, press the **End Exam** option at the top right of the screen and choose **End Exam**.



You will be asked to confirm that you are ready to end the exam:



When you end your exam, the plugin sends each of your models to the backend grading infrastructure. For each category, it will send the model that you **most recently tested** using the **Submit and Test model** button.

#### **WARNING!**

If there is a category where you didn't save a model and test it with the **Submit and Test model** button, no model will be submitted for that category and you will score zero for that category.

If there is a category where you updated and ran your code to save an improved model but did not test it with the **Submit and Test model** button, the previous version of your model (before you improved it) will be submitted for that category when you end your exam.

**CAUTION!** Once you end the exam, you will not be able to work on your models anymore. So make sure you really are done before you end your exam.

If you have not completed the exam within the allotted time, the exam will automatically end and you will be locked out from the plugin, you will not be able to continue working on the exam.

# FAQs

## How do I get my workstation ready for the exam?

See [Set up your environment to take the TensorFlow Developer Certificate Exam.](#)

### CALLING WINDOWS 10 USERS!

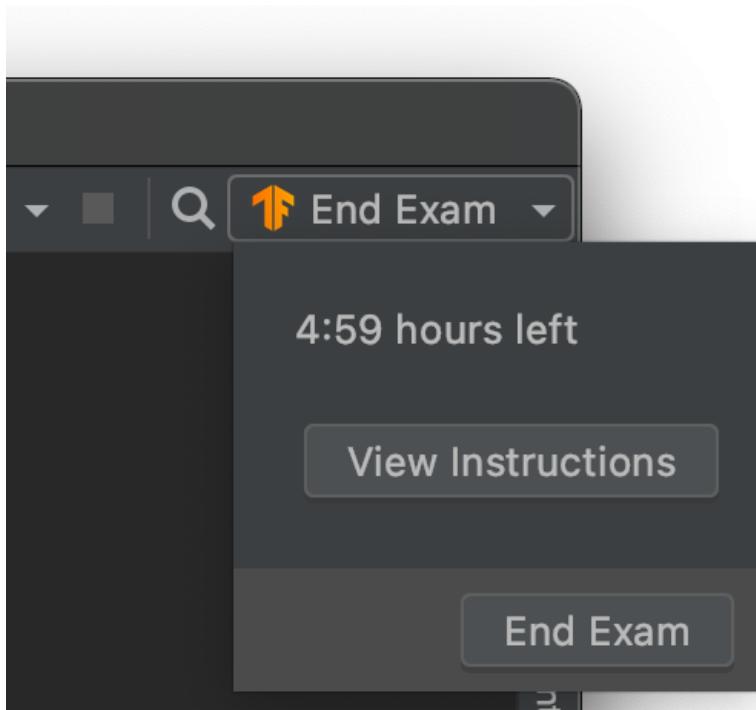
If you use Windows 10, pause Automatic Updates before taking the exam. You don't want your computer to start running a background update once you start training your models.

## What is the scoring system?

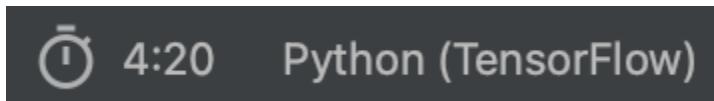
The categories progress in complexity, with Category 1 being the easiest and Category 5 being the most complex. The points awarded for each category increase with the complexity of the question. However, it is expected that you will submit a model in each category. If you do not submit a model in every category you are unlikely to pass the exam.

## How long do I have left?

To check how long you have left before your exam attempt ends, select the menu at the right of the **End Exam** option on the top right of the screen. (If you accidentally click End Exam, cancel the dialog box that asks if you are sure you want to end the exam.)



You can also see how long you have left by looking at the bottom left of the PyCharm screen, where you see a small clock icon showing the remaining time. In the figure shown here, there are four hours and twenty minutes left.



## What happens if I close PyCharm during the exam?

If you close PyCharm while the exam is in progress, then when you re-open PyCharm, the exam project will open automatically and you can continue working on it. However, if five hours has passed since you initially started the project, then when you open PyCharm next, the exam will end automatically and you will not be able to continue working on it.

Don't uninstall PyCharm until your exam has finished submitting, otherwise the grading of your exam will be unable to finish. PyCharm must be open for the exam submission process to finish.

## What happens if I don't end my exam before the time is up?

If you have not completed the exam within the allotted time, the exam will automatically end and you will be locked out from the plugin. You will not be able to continue working on the exam. If PyCharm is closed when the time is up, then the exam will automatically submit the next time PyCharm opens.

Don't uninstall PyCharm until your exam has finished submitting, otherwise the grading of your exam will be unable to finish.

We repeat:

Don't uninstall PyCharm until your exam has finished submitting, otherwise the grading of your exam will be unable to finish.

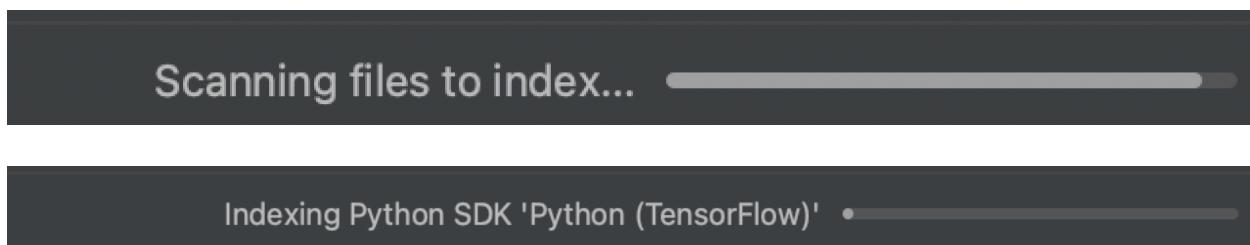
If your exam has difficulty submitting, don't uninstall PyCharm. Contact us at [tensorflow-certificate-support@google.com](mailto:tensorflow-certificate-support@google.com). (Note that we don't provide real-time support, and we can't answer your questions while you are taking the exam.)

## I can't find the Submit and Test model button

The **Submit and Test model** button is displayed in the Assistant panel. You must have the Assistant panel open to see it.

See [View instructions](#) for information on how to open the Assistant panel.

Sometimes when the exam starts, it takes PyCharm a while to finish indexing. You can see the indexing status at the very bottom of the PyCharm screen, such as:



When indexing happens, the Assistant panel can take a few minutes to load and display properly. If you don't see the Submit and Test model button, try opening the starter.py files in the project panel and switch between them in the file editor. Also try refreshing the Assistant

Panel. Make sure that the file editor is showing the starter.py file for the question that you want to test. Eventually the Assistant panel will display the Submit and Test model button for the file that is currently displayed and selected.

## Can I load additional libraries into PyCharm?

Yes.

When you install the TensorFlow certificate plugin in PyCharm, it installs TensorFlow and other relevant libraries.

However, if you find that your model implementation requires additional libraries, you can go ahead and install them into PyCharm.

You can see the libraries that the plugin loaded in the requirements.txt file.

To add additional libraries, you can add them to requirements.txt. Then PyCharm will offer to install the additional requirements.

## Can I change the version of TensorFlow that the plugin uses?

The grading infrastructure uses a specific version of TensorFlow. If you change the version of TensorFlow in the PyCharm project after you start the exam, then your models will be built with a different version of TensorFlow than the version that they will be tested against and consequently might run into errors during testing.

You can see the version of TensorFlow that the plugin loaded in the `requirements.txt` file in the exam project in PyCharm.

If you change the version of TensorFlow in the exam environment, we are unable to give you any support or compensation if you run into problems as you continue to take the exam.

## What can I use in the exam?

The exam will test you on your ability to define, train and test models with TensorFlow. You may use whatever learning resources you would normally use during your ML development work. During the exam, you are welcome to experiment with training models using GCP, AWS, Jupyter Notebooks or Google Colab, but you will still need to submit and test the models inside PyCharm.

Be aware that your models will be tested using the version of TensorFlow that is supported by the grading infrastructure. You cannot change the version of TensorFlow that is used to test and grade your models. You can see the version of TensorFlow that the grading infrastructure uses in the requirements.txt file in the exam project in PyCharm.

## Will I be able to pass the exam using my computer?

The TensorFlow Developer Certificate exam will require you to create and train models similar to those found on tensorflow.org/tutorials, such as:

- [Image classification](#)
- [Word embeddings](#)

We recommend that you practice these to make sure your hardware can handle them. We allow 5 hours for the exam because we know that it will take some time to train the models.

We rely on you, as an experienced ML practitioner, to understand the usage and capabilities of your own environment, be it a laptop, a desktop, a cloud-based virtual machine, or anything in between.

# Troubleshooting

This troubleshooting section includes:

- [Errors when run your code with the Run command](#)
- [Errors from Submit and Test your model](#)
- [General PyCharm Issues](#)

## Errors when run your code with the Run command

When you run your code, PyCharm displays the output in the Run window. Read any error messages that get displayed, these will typically relate to errors in your code.

## URLs for datasets use HTTPS

The starter code in several of the categories include the URL to the dataset. In some cases, this URL is shown with HTTPS.

If you do not have the appropriate security certificates installed, when you try to run the code that accesses a URL that uses HTTPS, you might get this error:

[SSL: CERTIFICATE\_VERIFY\_FAILED]

The fix is to remove the "S" from HTTPS in the code. So for example, the URL to the dataset would become:

`http://dataset_is_here_etc.../`

## Errors from Submit and Test your model

When you Submit and Test your model, the plugin attempts to upload the saved model in the current category to the grading infrastructure, which then runs your model against randomly selected values from the test data.

Errors can occur while the plugin is attempting to upload the file to the backend grading infrastructure as well as while the grader is attempting to load and evaluate the model.

- [Failures while the plugin is uploading your model file](#)
- [Failures while the the grader is evaluating your model](#)

### Failures while the plugin is uploading your model file

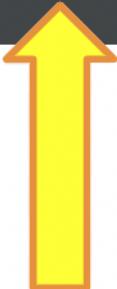
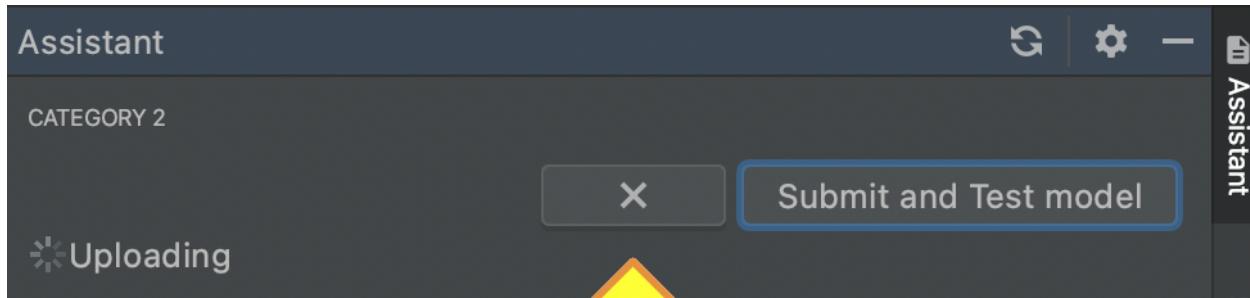
#### The submit and test process doesn't finish

A model file that is too large or needs too much memory might fail to complete the upload process from your environment to the backend grading infrastructure. Even if the file uploads successfully, it might fail to complete the evaluation process. In these cases, when you press the Submit and Test button, you will not get feedback other than that you keep waiting.

If you find yourself waiting for a while after pressing the Submit and Test button, it's likely that your model file is too large or requires too much memory to run.

It is expected that you will code your model so that it uses a reasonable amount of memory when it is run, and that the file size of the saved model is reasonable for the problem being solved.

To stop the submission process, press the X to the left of the **Submit and Test model** button.



### The file uploads but the grader can't evaluate it

If the grader can't load the model, the error returned by `tf.keras.models.load_model` will be displayed in the format:

*"Error when loading model. From tensorflow.keras.models.load\_model: <error>"*

For example:

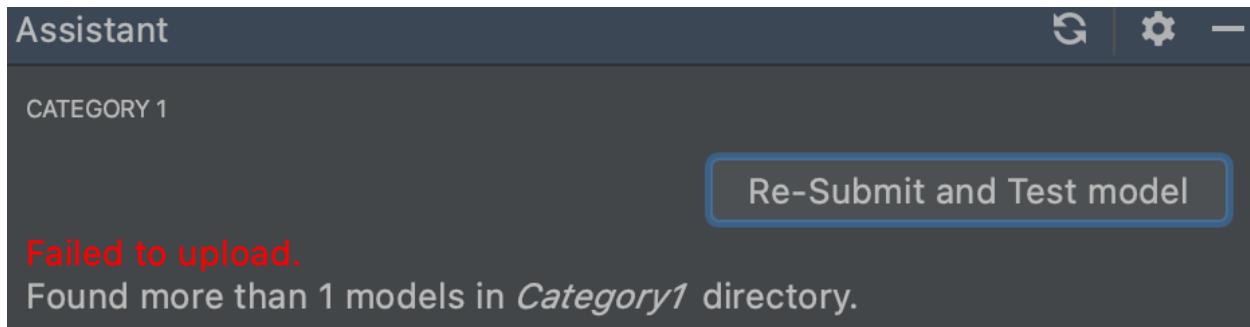
Error when loading model. From tensorflow.keras.models.load\_model:  
bad marshal data (unknown type code)

Read the error message carefully; it can include information that will help you fix your model.

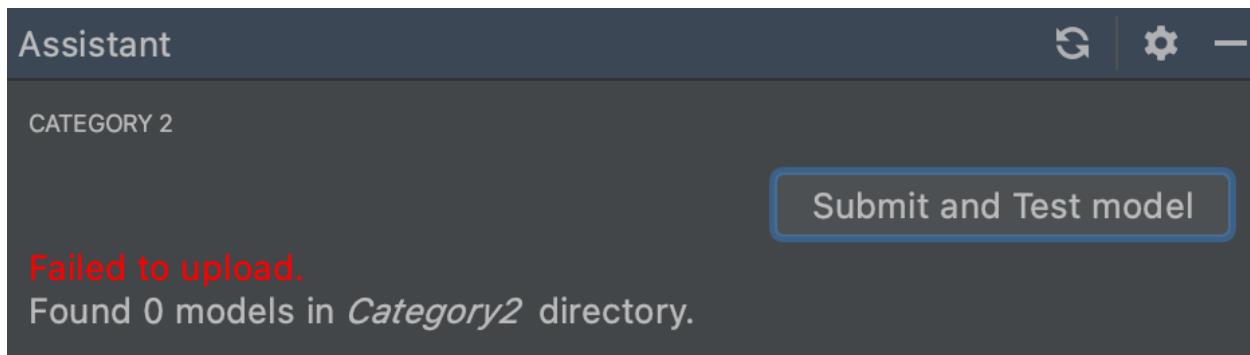
**Important:** If you get an error while your model is being loaded or tested, it is your responsibility to investigate and fix the error.

### Save one, and only one, model in each category

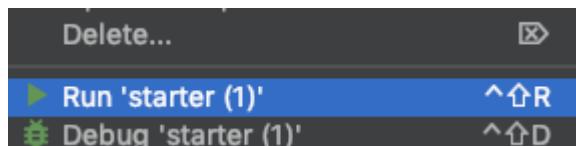
The error message "Failed to upload, Found more than one models in Category" means that you have more than one model in that category. Delete all models except one.



The error message "Failed to upload, Found 0 models in Category" means that you have not saved any models in that category.



Inspect the code for that category, make sure it creates and saves a model, and then run the code using the **Run** command.



### Failures evaluating your model

If the grader is able to load the model but the evaluation process fails, the error returned from the grading test will be displayed in the form:

"*Model loaded successfully but could not be scored: <error>*".

For example:

```
Model loaded successfully but could not be scored: Error when  
checking input: expected conv2d_input to have 4 dimensions, but got  
array with shape (1, 28, 28)
```

Read the error message carefully; it can include information that will help you fix your model.

**Important:** If you get an error while your model is being loaded or tested, it is your responsibility to investigate and fix the error.

As an experienced ML practitioner, you are expected to be able to investigate the error messages you get from the grading infrastructure and adjust your code accordingly.

Note that the grading infrastructure uses specific versions of TensorFlow and other libraries. You can look at `requirements.txt` in your PyCharm project to check the versions.

## General PyCharm Issues

When the exam starts it creates a virtual environment containing everything you need for the exam. If you have set up your environment correctly as discussed in [Before you begin: Get your environment ready to take the exam](#), you are unlikely to have configuration issues when you start the exam in PyCharm. However, in some rare cases you might run into the problems listed here.

### 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)
```

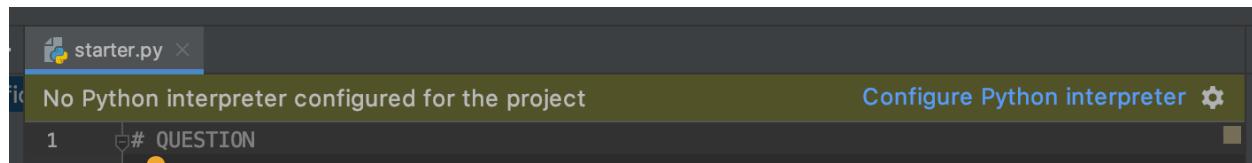
The terminal will report back the Python version as shown here:

```
PyDev console:  
>>>print (sys.version)  
'3.8.6 (v3.8.6:db455296be, Sep 23 2020, 13:31:39)
```

```
>>>
```

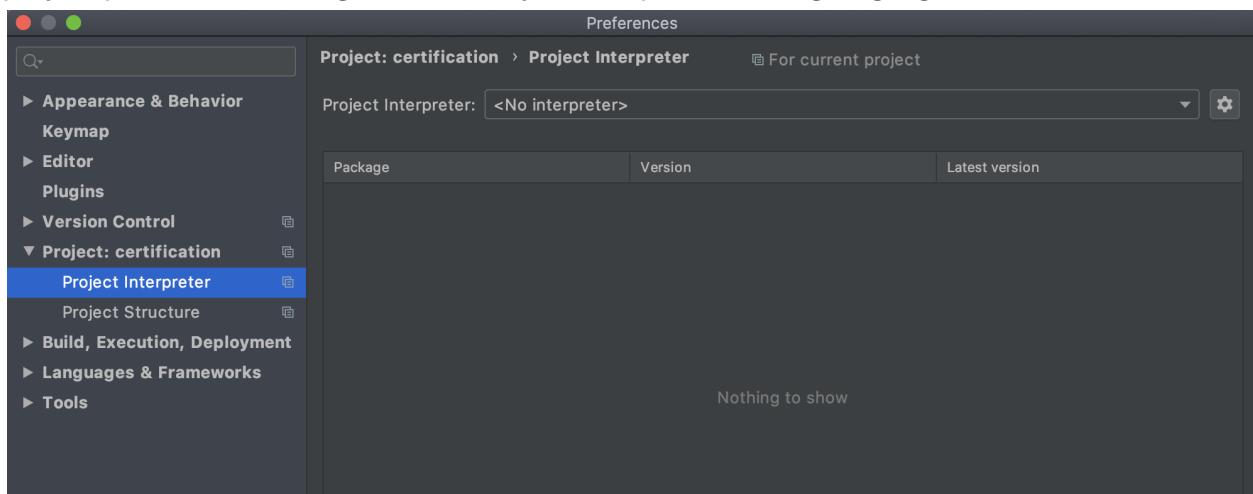
## You see "No Python Interpreter Configured for this Project"

On some machines there is a bug where the process of setting up the exam environment doesn't set up the Python interpreter correctly and you see a message saying "No Python interpreter configured for the project":



To fix this:

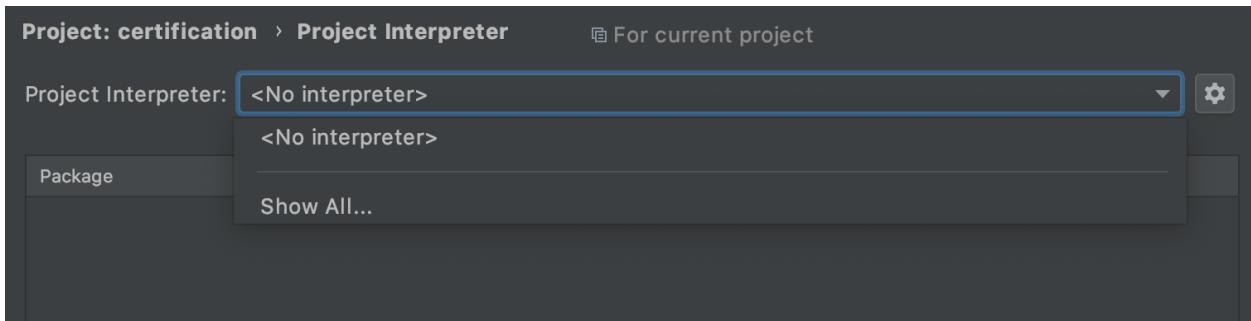
1. Click the blue 'Configure Python interpreter' link at the top right. This will open the project preferences dialog with the 'Project Interpreter' settings highlighted.



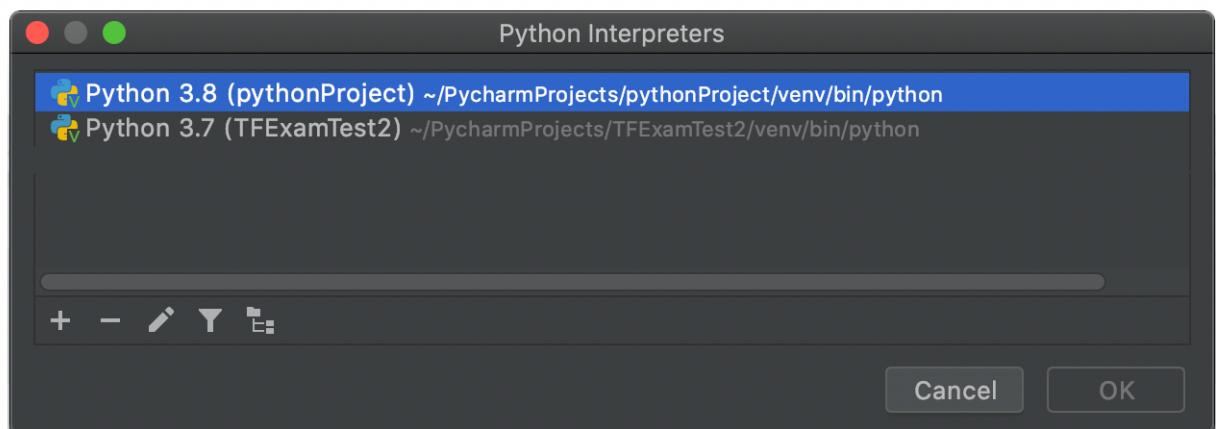
2. At the top of the screen there's a drop down saying 'Project Interpreter', select this, and you'll see a list of available Python interpreters.

Often it will look like this, where there's nothing available. This is why the environment

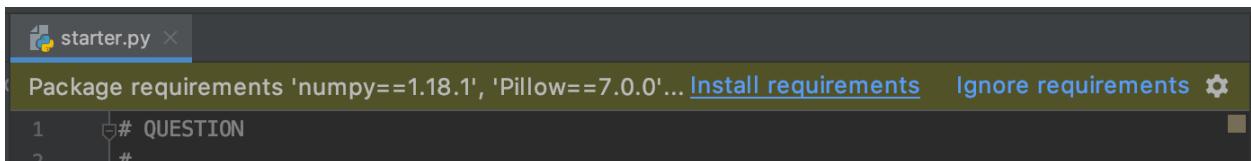
didn't recognize the interpreter.



3. Click 'Show All...' to see a list of available interpreters. If you had created one earlier with the instructions from the 'Before you Begin' section, it will show up here and you can use it.



Once you've done that and said 'OK' to return to the code editor, you may still see something like this:

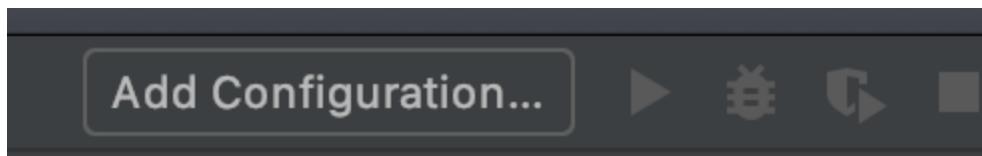


That means the interpreter environment you created didn't have all the required dependencies.

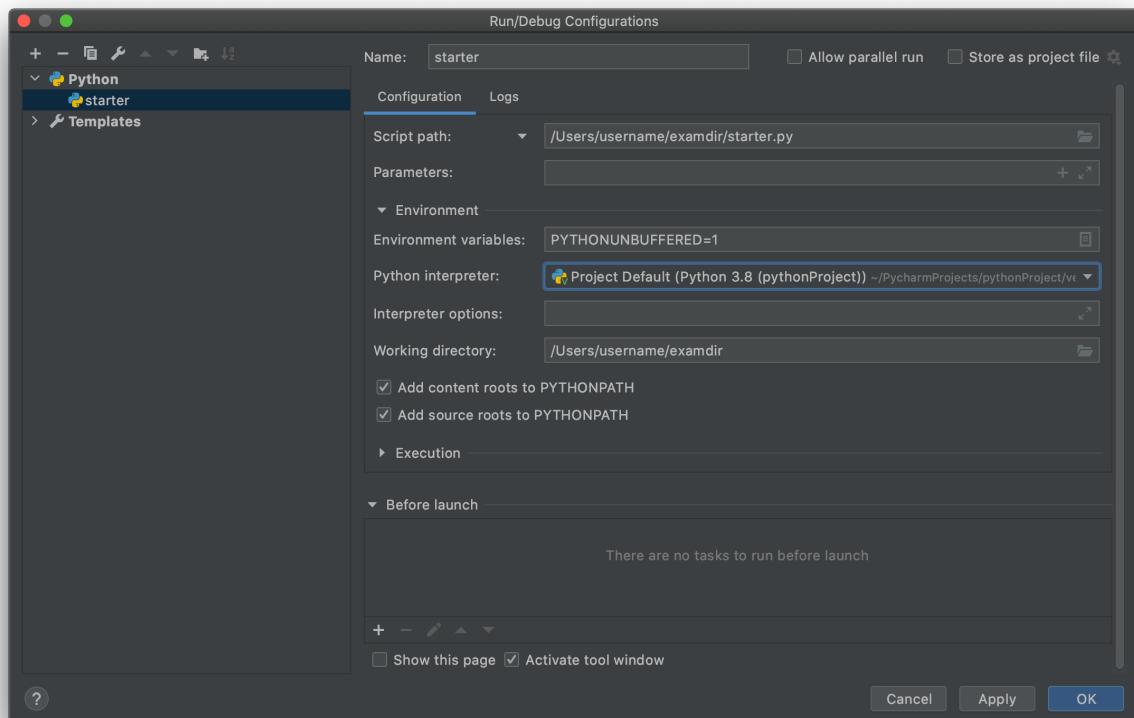
4. Click the 'Install requirements' link and PyCharm will handle that for you.

If you don't see the 'Run...' link on a .py file.

To run a Python file in PyCharm, you right click on it and select Run.... If you do not see this option, wait briefly. Often it takes a moment for PyCharm to recognize the interpreter environment. If it takes more than 30 seconds, close PyCharm and re-open. It should now work. If it still isn't visible, select the 'Add configuration...' button from the top right hand side of the IDE



Click the + button and select Python.



Check that the Python Interpreter setting is correct. If it isn't, you can change it. On the script path setting, browse to the file that you want to run, select it, and press 'OK'. Now you'll see the configuration in the top right hand side of the screen has the 'Run' and 'Debug' buttons enabled. You should also be able to right click a .py file to run it.

## Connection errors

There are many reasons why you might experience connection problems while taking the TensorFlow Developer Certificate exam, ranging from an internet outage in your area, to firewalls blocking your connection, to your computer not being properly configured, as well as other possible reasons.

### Important!

**We are unable to debug connection problems for you.** It is your responsibility to ensure you have a strong and reliable internet connection, and that your computer is properly configured, before you start taking the exam.

Here are some possible errors and suggested solutions for you to try (but they might not work in every case).

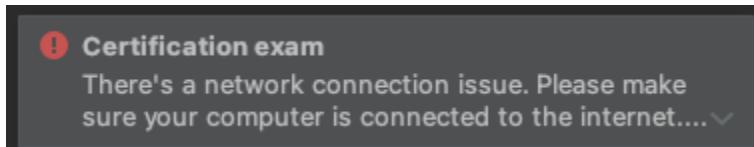
### Network is unreachable

When you get an error message, read it carefully. Here's an example of an error message you might see when you try to submit and test your model when the network is unreachable

```
java.net.ConnectException: Network is unreachable (connect failed)
```

```
...
```

During the exam, if you lose connection, you might also see a dialog box like this in Pycharm:



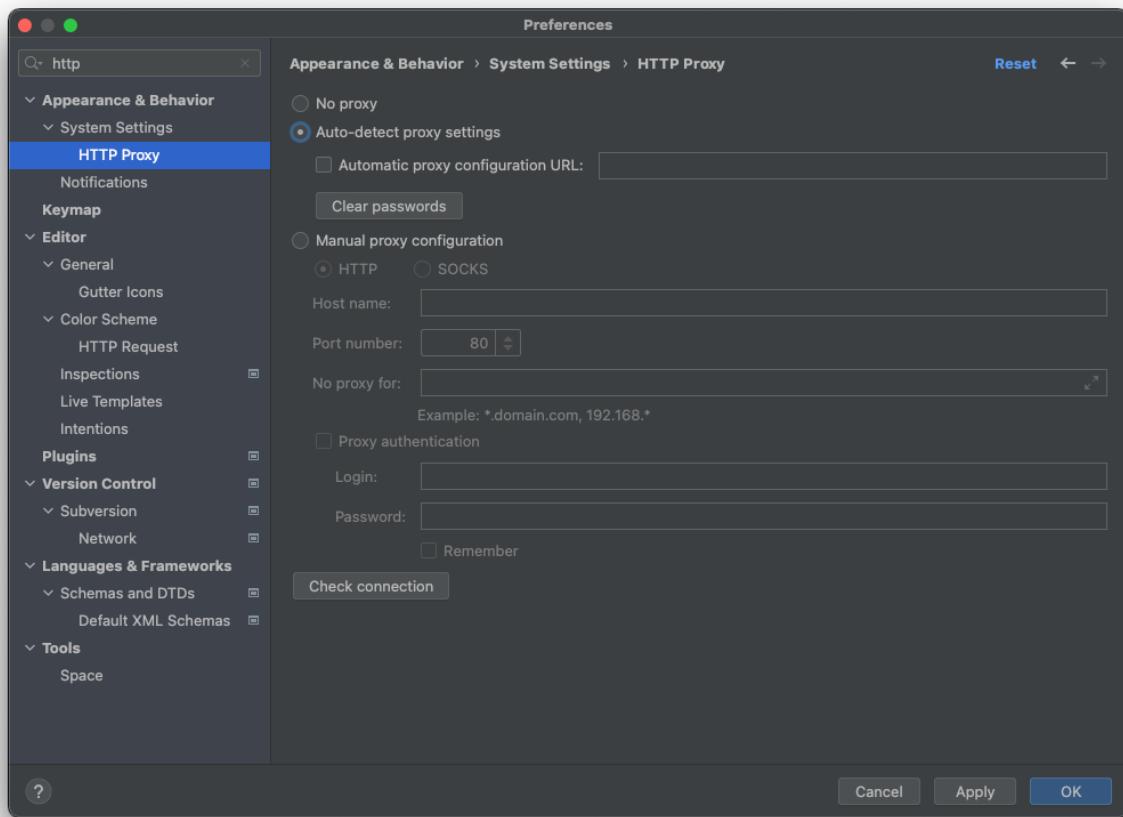
There could be many reasons why the network is unreachable.

To investigate, first check your wifi or internet connection. Make sure you are connected to the appropriate wifi for your situation. For example, if you are using a work computer, you might have a choice of a guest or corporate wifi.

After checking you are using the correct wifi, ensure that the auto-detect HTTP proxy setting is enabled as follows:

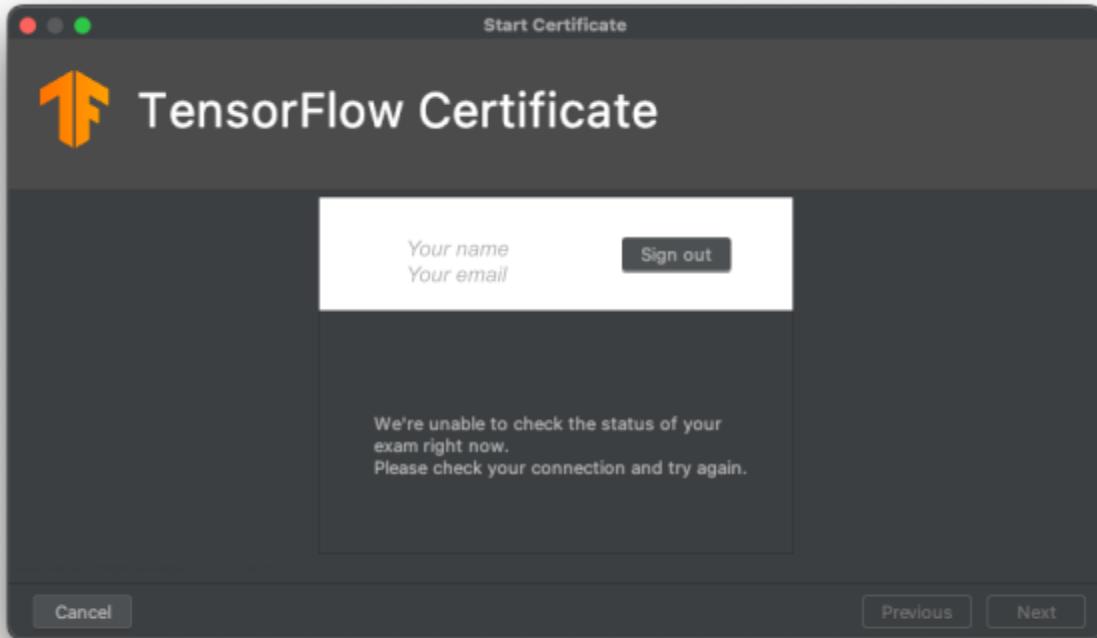
### Enable Auto detect Proxy Setting

1. In Pycharm, go to Preferences > HTTP Proxy.
2. Select Auto-detect proxy settings – even if it looks like it's already selected, click the **Auto-detect proxy settings** button.
3. Press **OK**.



## We're unable to check the status of your connection

If you see the error "**We're unable to check the status of your exam right now. Please check your connection and try again**" as shown in the following dialog box when you try to start the TensorFlow Developer Certificate exam, it might be that your network is unreachable.



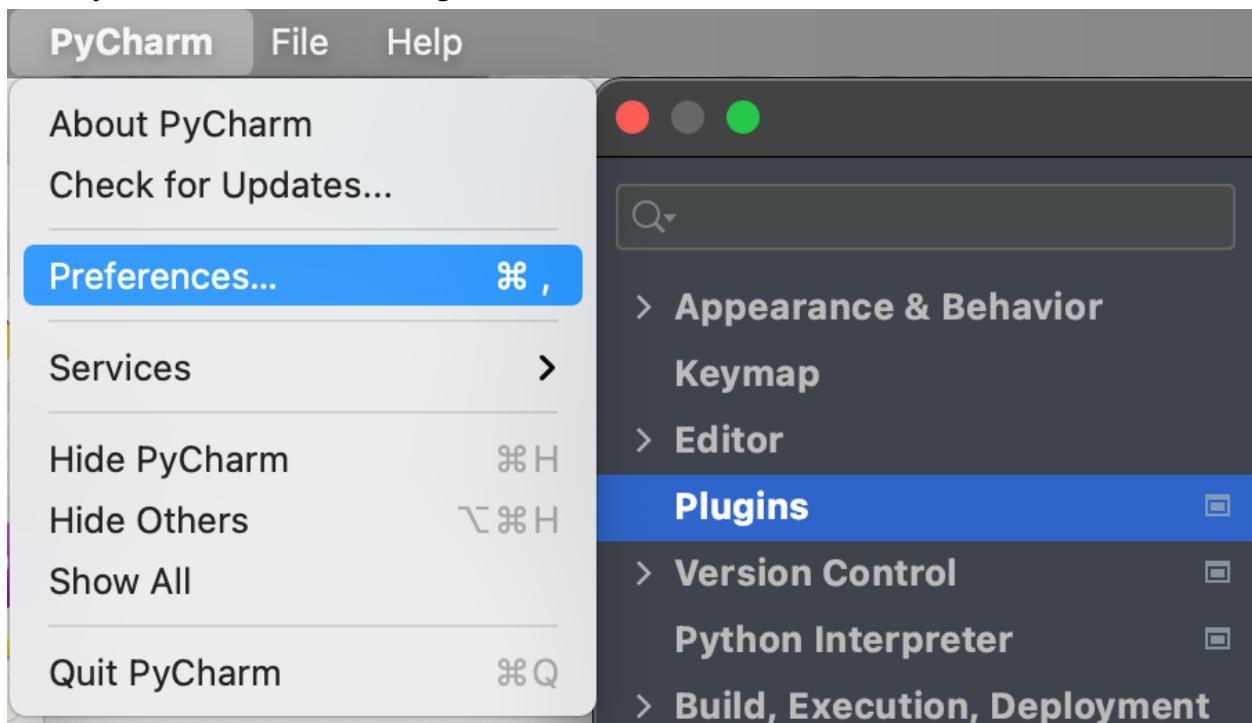
Suggestion: First check that you are connecting to the correct wifi for your situation, then try enabling the Auto-detect proxy setting as described above.

## Uninstall the plugin (when retaking the exam)

If you are retaking the exam, you will need to uninstall the TensorFlow certificate plugin first, then install it again.

1. Open PyCharm.

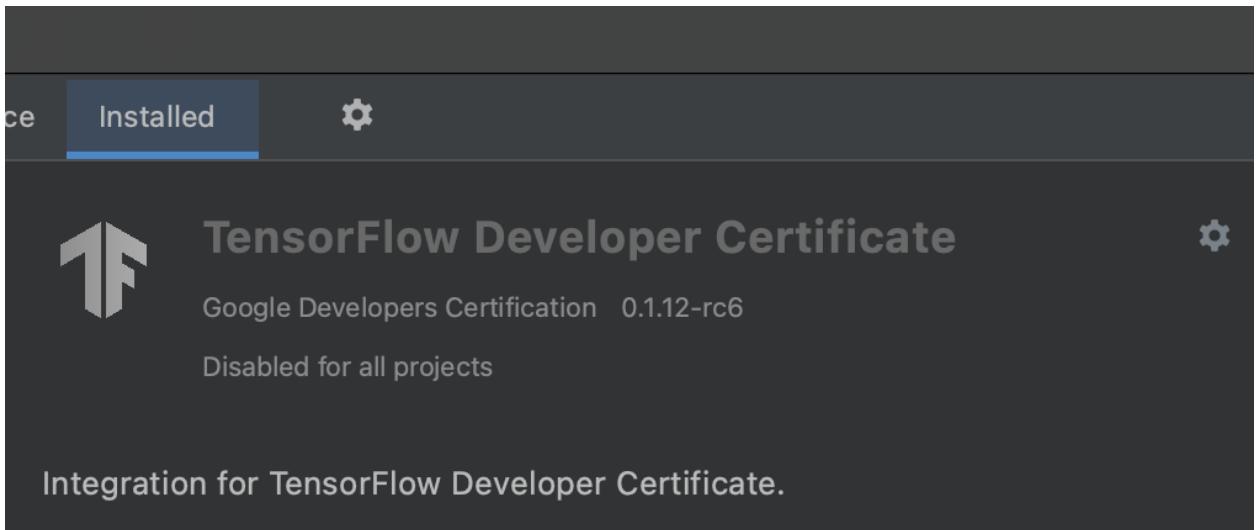
2. Go to PyCharm > Preferences > Plugins.



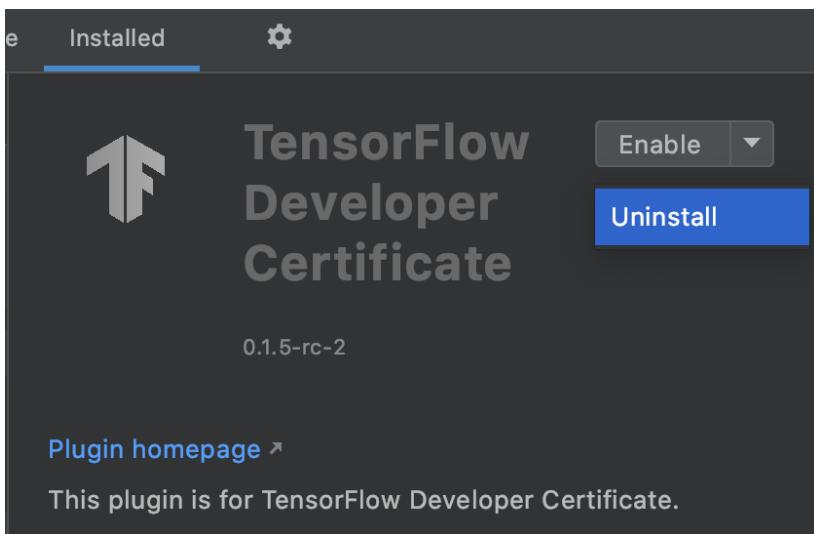
3. Check if the plugin is already installed. Click the **Installed** tab.

If the TensorFlow Developer Certificate plugin is not installed, then you won't see it and you can continue installing the plugin, as described in [Install the plugin for the exam](#).

If the plugin is already installed, you will see it:



4. If you already have the plugin installed, even if it is disabled, you must uninstall it first. From the grayed-out **Enable** menu, choose **Uninstall**.



5. After uninstalling the plugin, restart the IDE again.
6. To reinstall the plugin for the TensorFlow Developer Certificate exam, see the section [Install the plugin for the exam](#).