Data Glacier

Your Deep Learning Partner

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Batch Code: LISUM 19

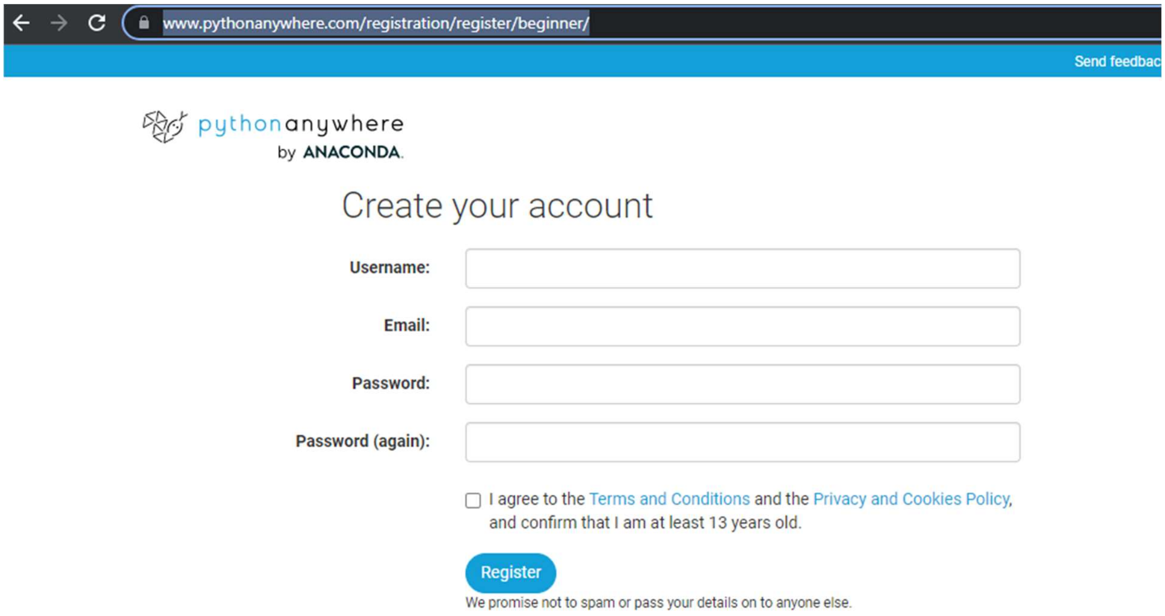
Submission date: 04/04/2023

Submitted to: Data Glacier

Website link: http://iandavid.pythonanywhere.com/

----------------------------------- PYHONANYWHERE.COM Deployment -----------------

First thing you should do is register an account and you can register at https://www.pythonanywhere.com/registration/register/beginner/. The next step is to upload the flask web application and machine learning model files.



www.pythonanywhere.com/registration/register/beginner/

Create your account

Username:

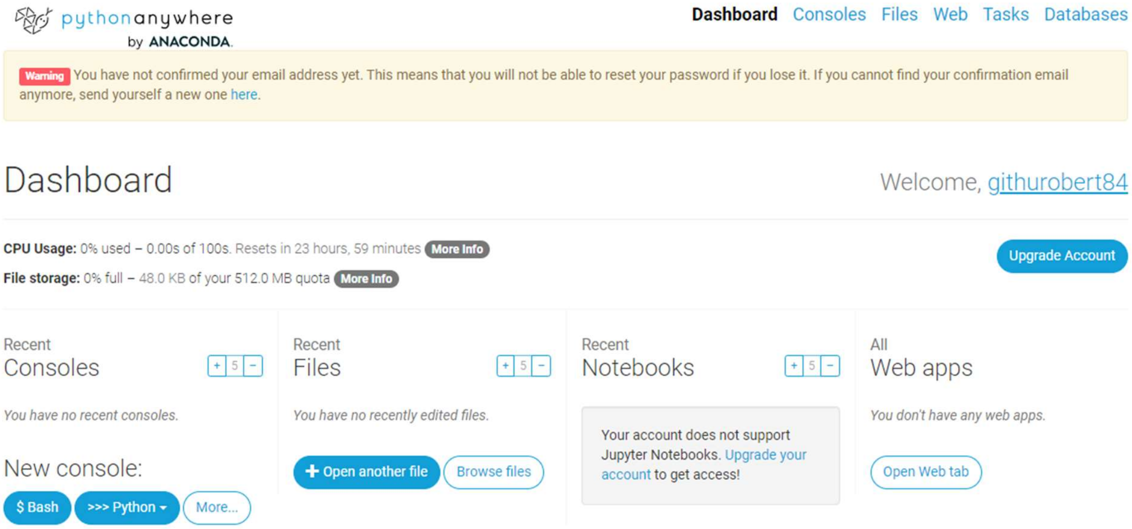
Email:

Password:

Password (again):

□ I agree to the Terms and Conditions and the Privacy and Cookies Policy, and confirm that I am at least 13 years old.

We promise not to spam or pass your details on to anyone else.



Warning You have not confirmed your email address yet. This means that you will not be able to reset your password if you lose it. If you cannot find your confirmation email anymore, send yourself a new one here.

Dashboard

Welcome, githurobert84

CPU Usage: 0% used – 0.00s of 100s. Resets in 23 hours, 59 minutes

File storage: 0% full – 48.0 KB of your 512.0 MB quota

Recent Consoles

You have no recent consoles.

Recent Files

You have no recently edited files.

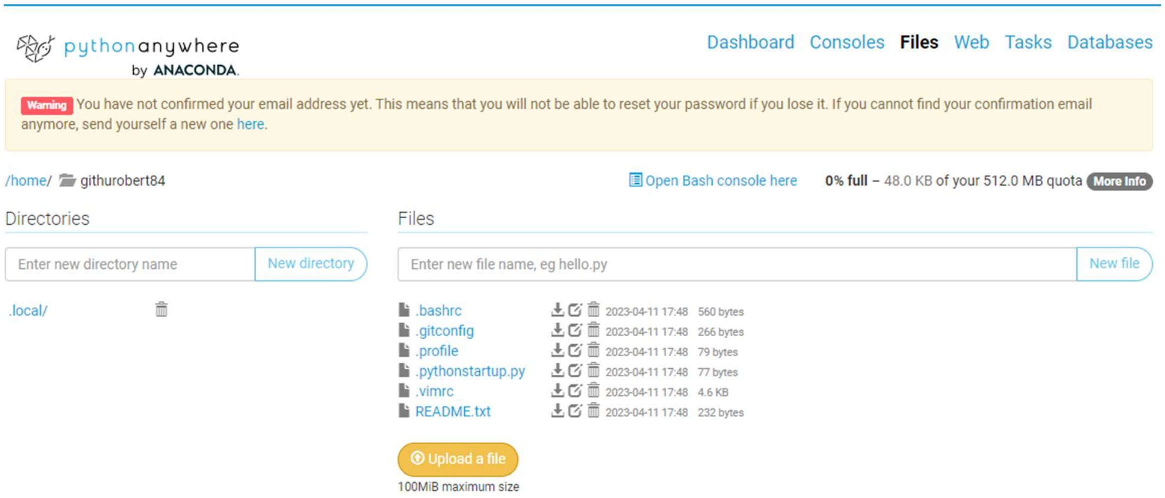
Recent Notebooks

Your account does not support Jupyter Notebooks. Upgrade your account to get access!

All Web apps

You don't have any web apps.

- Go to the ‘Files’ tab and click ‘Upload a file’ to upload the necessary files.


pythonanywhere by ANACONDA.
Dashboard Consoles Files Web Tasks Databases

Warning You have not confirmed your email address yet. This means that you will not be able to reset your password if you lose it. If you cannot find your confirmation email anymore, send yourself a new one here.

/home/ githurobert84

Open Bash console here 0% full – 48.0 KB of your 512.0 MB quota More Info

Directories

Enter new directory name New directory

.local/

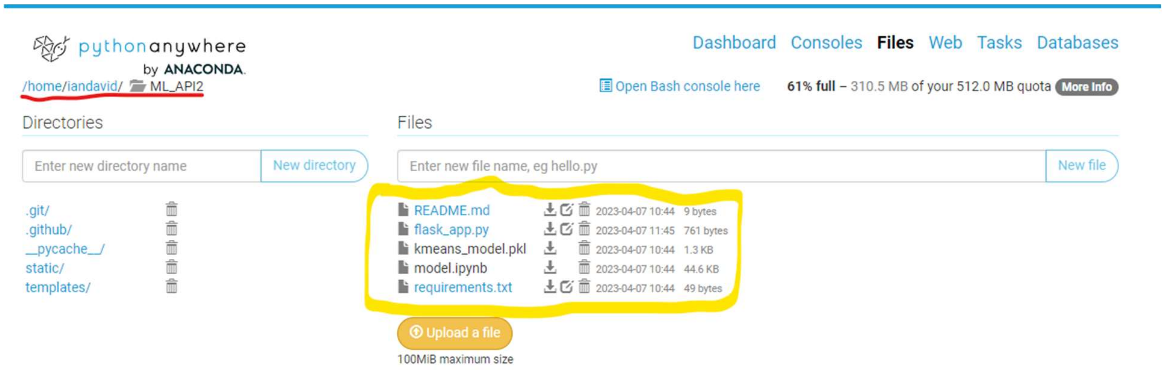
Files

Enter new file name, eg hello.py New file

.bashrc	2023-04-11 17:48	560 bytes
.gitconfig	2023-04-11 17:48	266 bytes
.profile	2023-04-11 17:48	79 bytes
.pythonstartup.py	2023-04-11 17:48	77 bytes
.vimrc	2023-04-11 17:48	4.6 KB
README.txt	2023-04-11 17:48	232 bytes

Upload a file
100MiB maximum size

I will assume that you've upload your code to the following path `/home/yourusername/mysite`:


pythonanywhere by ANACONDA.
Dashboard Consoles Files Web Tasks Databases

/home/iandavid/ ML_API2

Open Bash console here 61% full – 310.5 MB of your 512.0 MB quota More Info

Directories

Enter new directory name New directory

.git/
.github/
__pycache__/
static/
templates/

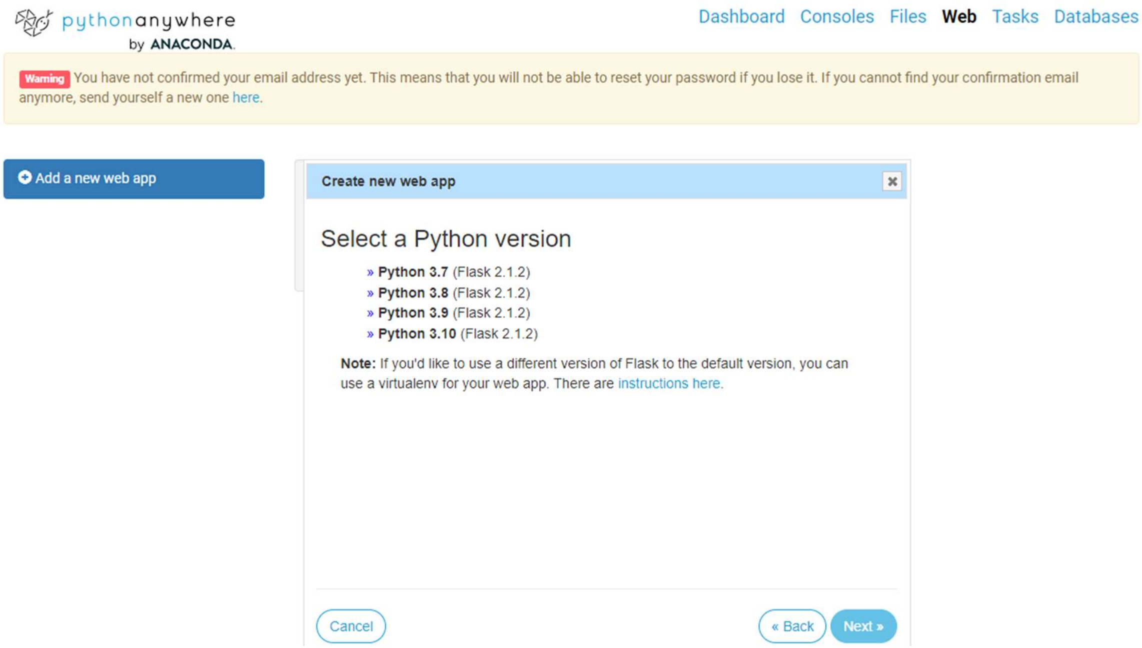
Files

Enter new file name, eg hello.py New file

README.md	2023-04-07 10:44	9 bytes
flask_app.py	2023-04-07 11:45	761 bytes
kmeans_model.pkl	2023-04-07 10:44	1.3 KB
model.ipynb	2023-04-07 10:44	44.6 KB
requirements.txt	2023-04-07 10:44	49 bytes

Upload a file
100MiB maximum size

- We are going to use the 'Importing a pre-existing app using Manual configuration, and using a virtualenv' method.
- Go to the 'Web' Tab and hit **Add a new Web App**, and choose Flask and the Python version you want. For my case I chose version 3.10.



Warning You have not confirmed your email address yet. This means that you will not be able to reset your password if you lose it. If you cannot find your confirmation email anymore, send yourself a new one here.

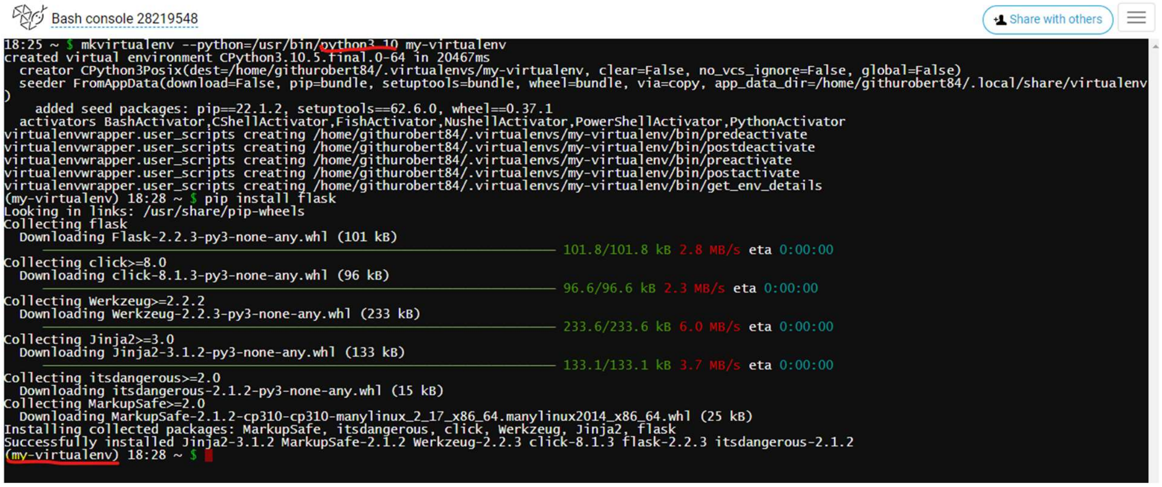
Create new web app

Select a Python version

- » **Python 3.7** (Flask 2.1.2)
- » **Python 3.8** (Flask 2.1.2)
- » **Python 3.9** (Flask 2.1.2)
- » **Python 3.10** (Flask 2.1.2)

Note: If you'd like to use a different version of Flask to the default version, you can use a virtualenv for your web app. There are instructions here.

Setting up your virtualenv



```
18:25 ~ $ mkvirtualenv --python=/usr/bin/python3.10 my-virtualenv
created virtual environment CPython3.10.5.final.0-64 in 20467ms
  creator CPython3Posix(dest=/home/githurobert84/.virtualenvs/my-virtualenv, clear=False, no_vcs_ignore=False, global=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=/home/githurobert84/.local/share/virtualenv
)
    added seed packages: pip==22.1.2, setuptools==62.6.0, wheel==0.37.1
  activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
virtualenvwrapper.user_scripts creating /home/githurobert84/.virtualenvs/my-virtualenv/bin/predeactivate
virtualenvwrapper.user_scripts creating /home/githurobert84/.virtualenvs/my-virtualenv/bin/postdeactivate
virtualenvwrapper.user_scripts creating /home/githurobert84/.virtualenvs/my-virtualenv/bin/preactivate
virtualenvwrapper.user_scripts creating /home/githurobert84/.virtualenvs/my-virtualenv/bin/postactivate
virtualenvwrapper.user_scripts creating /home/githurobert84/.virtualenvs/my-virtualenv/bin/get_env_details
(my-virtualenv) 18:28 ~ $ pip install flask
Looking in links: /usr/share/pip-wheels
Collecting flask
  Downloading Flask-2.2.3-py3-none-any.whl (101 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 101.8/101.8 kB 2.8 MB/s eta 0:00:00
Collecting click>=8.0
  Downloading click-8.1.3-py3-none-any.whl (96 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 96.6/96.6 kB 2.3 MB/s eta 0:00:00
Collecting Werkzeug>=2.2.2
  Downloading Werkzeug-2.2.3-py3-none-any.whl (233 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 233.6/233.6 kB 6.0 MB/s eta 0:00:00
Collecting Jinja2>=3.0
  Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 133.1/133.1 kB 3.7 MB/s eta 0:00:00
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting MarkupSafe>=2.0
  Downloading MarkupSafe-2.1.2-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (25 kB)
Installing collected packages: MarkupSafe, itsdangerous, click, Werkzeug, Jinja2, flask
Successfully installed Jinja2-3.1.2 MarkupSafe-2.1.2 Werkzeug-2.2.3 click-8.1.3 flask-2.2.3 itsdangerous-2.1.2
(my-virtualenv) 18:28 ~ $
```

Open up a new Bash console from your Dashboard and run

```
mkvirtualenv --python=/usr/bin/python3.10 my-virtualenv
pip install flask
```

You'll see the prompt changes from a `$` to saying `(my-virtualenv)$` -- that's how you can tell your virtualenv is active. Whenever you want to work on your project in the console, you need to make sure the virtualenv is active. You can reactivate it at a later date with

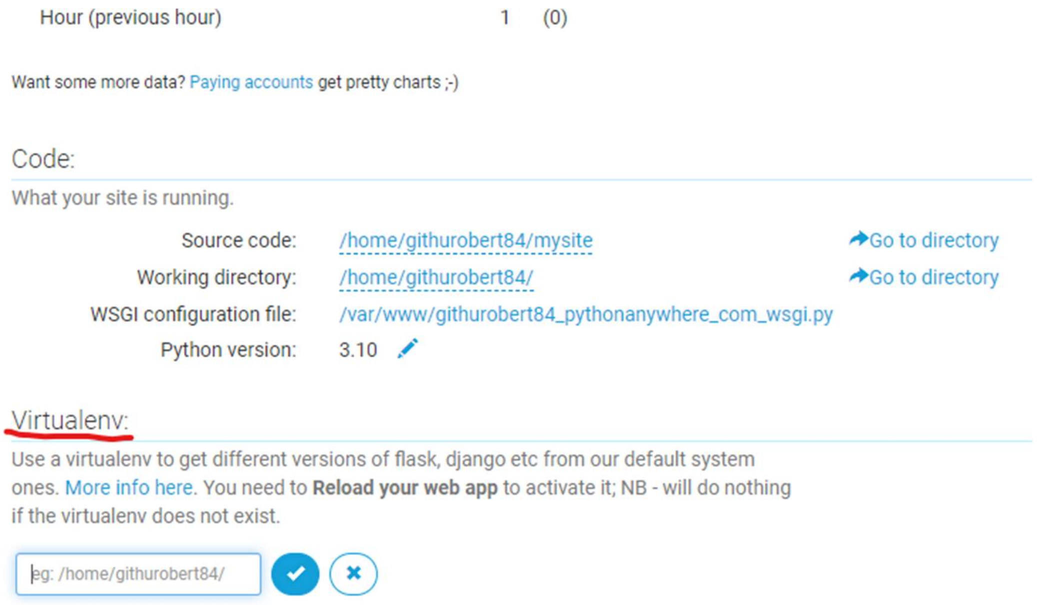
```
$ workon my-virtualenv
(my-virtualenv)$
```

You can also install any other dependencies you may have at this point using `pip install -r requirements.txt`

Setting up the Web app using Manual configuration

Go to the ‘Web’ Tab and hit **Add a new web app**. Choose **Manual Configuration**, and then choose the **Python version** -- make sure it's the same version as the one you used in your virtualenv

Now go to the **Virtualenv** section, and enter your virtualenv name: *my-virtualenv*. When you hit enter, you'll see it updates to the full path to your virtualenv (*/home/yourusername/.virtualenvs/my-virtualenv*).



Hour (previous hour) 1 (0)

Want some more data? Paying accounts get pretty charts ;-)

Code:

What your site is running.

Source code:	/home/githurobert84/mysite	Go to directory
Working directory:	/home/githurobert84/	Go to directory
WSGI configuration file:	/var/www/githurobert84_pythonanywhere_com_wsgi.py	
Python version:	3.10	

Virtualenv:

Use a virtualenv to get different versions of flask, django etc from our default system ones. More info here. You need to **Reload your web app** to activate it; NB - will do nothing if the virtualenv does not exist.

Finally, go edit the wsgi configuration file. You'll find a link to it near the top of the Web tab.

Configuring the WSGI file

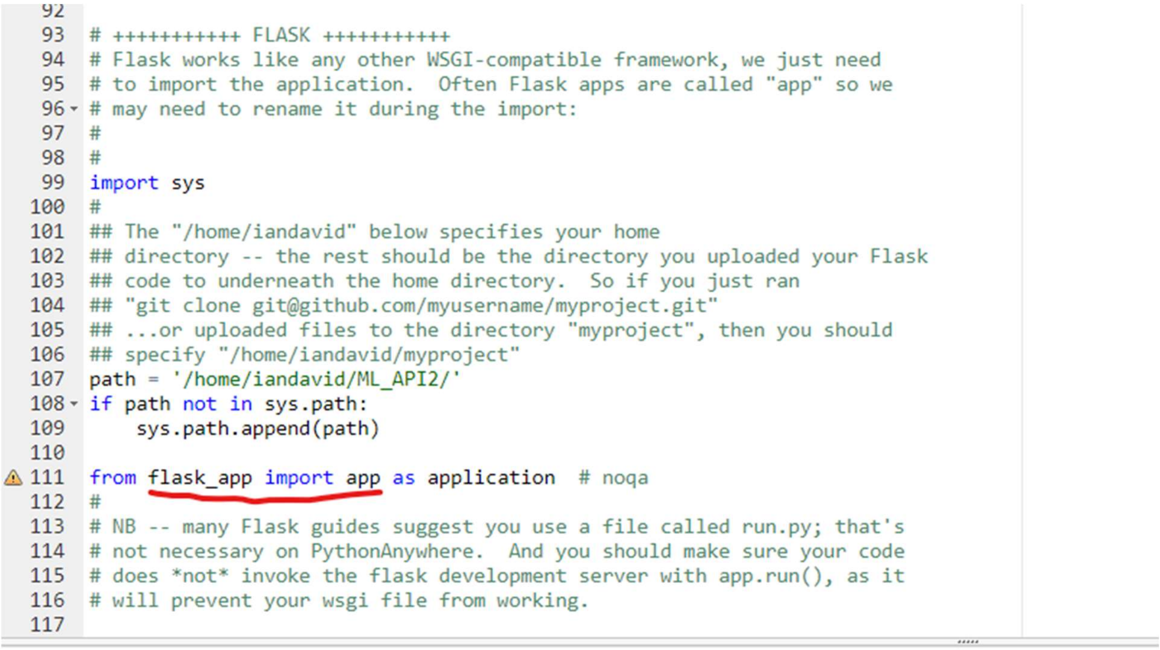
To configure this file, you need to know which file your flask app lives in. The flask app usually looks something like this:

```
app = Flask(__name__)
```

Make a note of the path to that file, and the name of the app variable (is it "app"? Or "application"?) -- in this example, let's say it's `/home/yourusername/mysite/flask_app.py`, and the variable is "app".

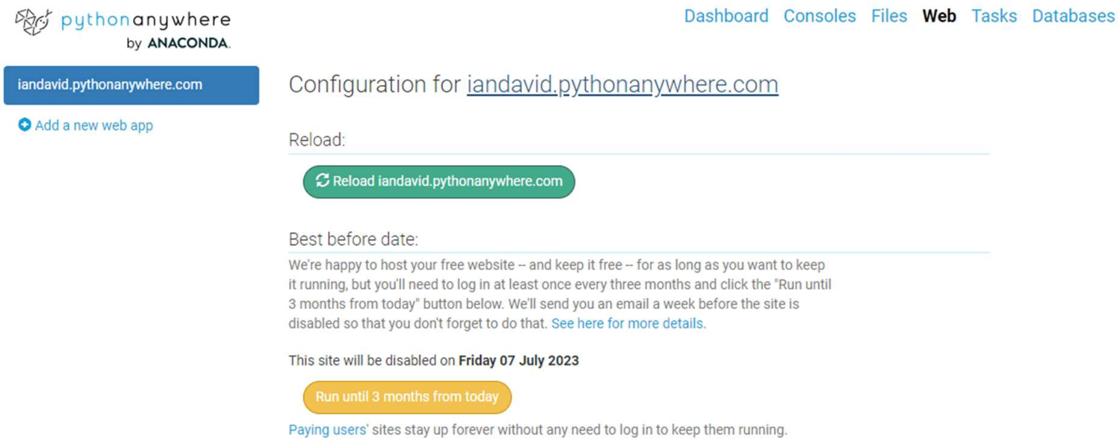
In your WSGI file, skip down to the flask section, uncomment it, and make it looks something like this and then save the changes:

```
import sys
path = '/home/yourusername/mysite'
if path not in sys.path:
   sys.path.insert(0, path)

from flask_app import app as application
```



```
# +++++++++++ FLASK +++++++++++
# Flask works like any other WSGI-compatible framework, we just need
# to import the application.  Often Flask apps are called "app" so we
# may need to rename it during the import:
#
#
import sys
#
## The "/home/iandavid" below specifies your home
## directory -- the rest should be the directory you uploaded your Flask
## code to underneath the home directory.  So if you just ran
## "git clone git@github.com/myusername/myproject.git"
## ...or uploaded files to the directory "myproject", then you should
## specify "/home/iandavid/myproject"
path = '/home/iandavid/ML_API2/'
if path not in sys.path:
    sys.path.append(path)

from flask_app import app as application  # noqa
#
# NB -- many Flask guides suggest you use a file called run.py; that's
# not necessary on PythonAnywhere.  And you should make sure your code
# does *not* invoke the flask development server with app.run(), as it
# will prevent your wsgi file from working.
```

- Reload the application and then open it on a new tab (http://iandavid.pythonanywhere.com/)


pythonanywhere by ANACONDA.
Dashboard
Consoles
Files
Web
Tasks
Databases
iandavid.pythonanywhere.com
Add a new web app
Reload iandavid.pythonanywhere.com
Run until 3 months from today

Configuration for iandavid.pythonanywhere.com

Reload:

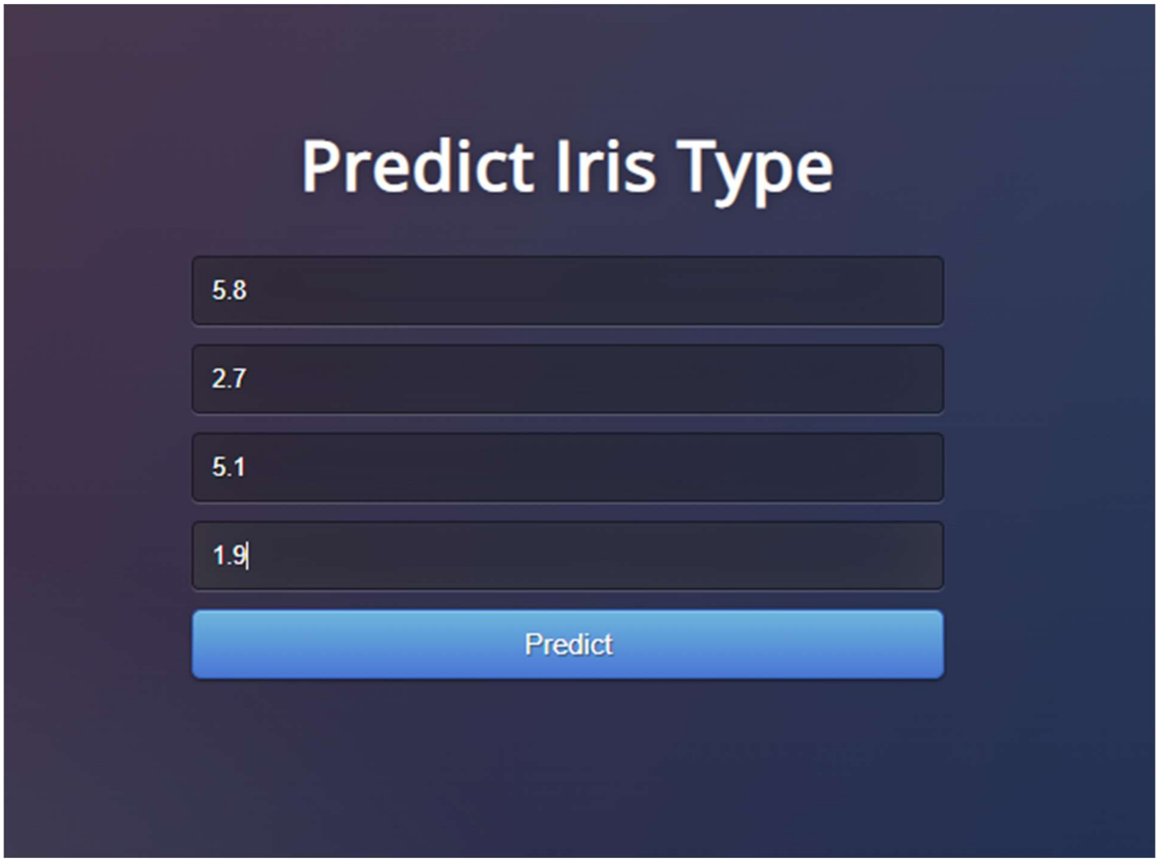
Best before date:

We're happy to host your free website -- and keep it free -- for as long as you want to keep it running, but you'll need to log in at least once every three months and click the "Run until 3 months from today" button below. We'll send you an email a week before the site is disabled so that you don't forget to do that. See here for more details.

This site will be disabled on **Friday 07 July 2023**

Paying users' sites stay up forever without any need to log in to keep them running.

- Enter the required details for petal and sepal lengths and widths to get a prediction of the Iris type.


Predict Iris Type

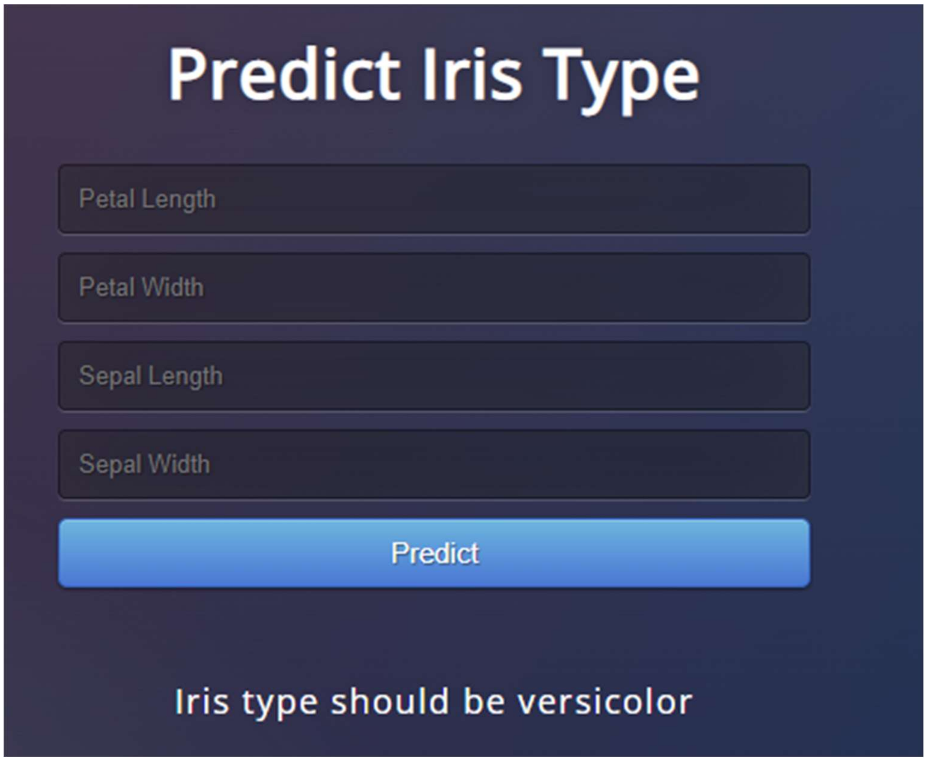
5.8

2.7

5.1

1.9

- Click on the ‘Predict’ button to see the iris type predicted.


Predict Iris Type

Iris type should be versicolor