UDACITY

🗗 **DISCUSS ON STUDENT HUB** ›

Use a Pre-trained Image Classifier to Identify Dog Breeds

REVIEW

CODE REVIEW 4

HISTORY

## Meets Specifications

Dear Student,

Congratulations!!!!👏🏼👏🏼👏🏼👏🏼
You've successfully passed all the specifications in this submission and I must admit that the structure of this project implementation is impressive. Going through the work, I could appreciate the time and effort put into this submission as it meets all the principal objectives. 🖼️:+1:

You should be proud of the work done as you seemed to have a good hold on Python programming. You have created an image classifier to identify dog breeds from drawing upon libraries and automate scripts to solve complex problems quickly. Please continue with this same spirit of hard work in the projects ahead. I wish you all the best. 💪🏼

> How can I download the entire workspace, including all the codes & files, to my local laptop? Much appreciated!

1- From your workspace, **right click** on `workspace`
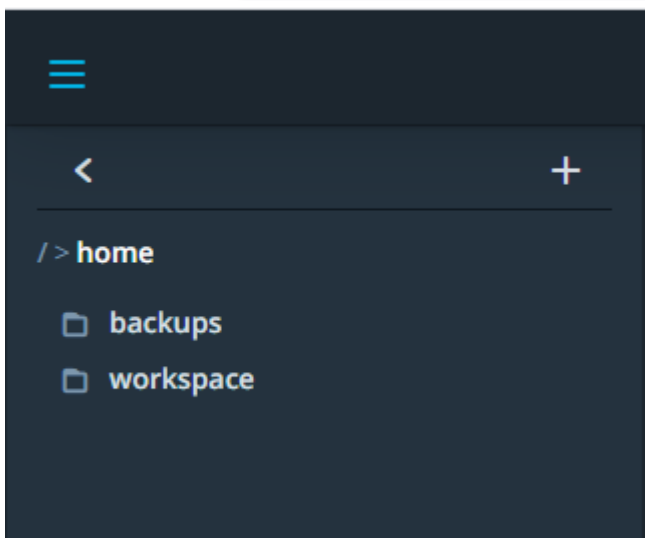
2- Then click on `Download`
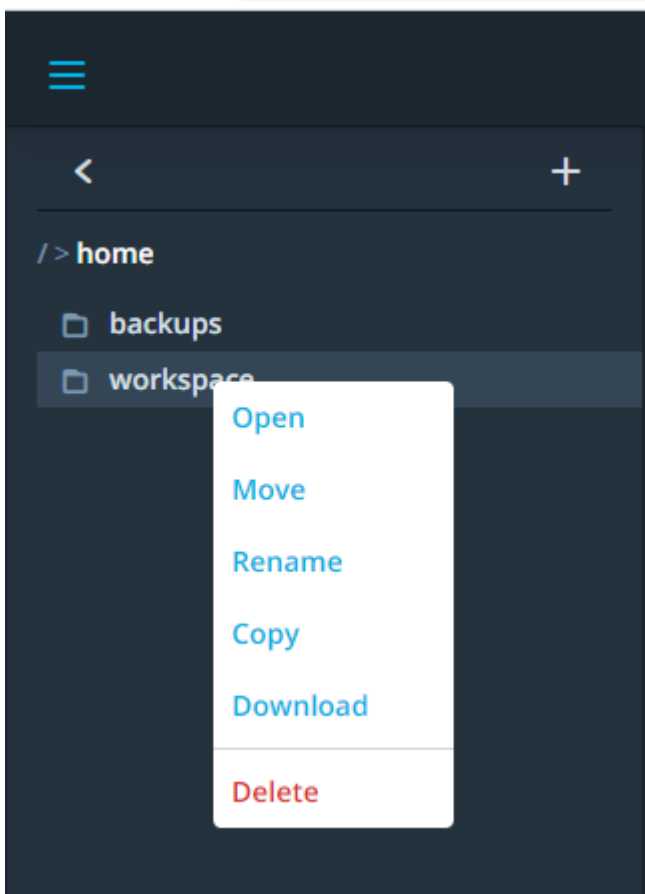
Timing Code

✓

Student calls the time functions before the start of main code and after the main logic has been finished.

Well done measuring execution time. This is the first step in the process of code optimization. Keep it up!

> ** Total Elapsed Runtime: 0:0:4

Tips

Here are some documents on the topic.

1. Time a Python Function
2. Python time measure function
3. Time access and conversions
4. Time Functions in Python

Command Line arguments

✓

adds command line argument for '--dir'
uses default ='pet_images/'

Good work! the output of the `python check_images.py --dir pet_images/` is superb.:+1:

✓

adds command line argument for '--arch'
default='vgg'

It's remarkable to see the `--arch` used in your work with `default='vgg'`. That's neat!

✓

adds command line argument for '--dogfile'
default='dognames.txt'

`python check_images.py --dogfile dognames.txt` gives a good result. Keep working hard!

Pet Image Labels

✓

Makes sure files starting with '.' are ignored.
Checks for '.' using a conditional statement.

Comment

Please, note that hidden files could cause a lot of trouble. Since the files are hidden you might have trouble understanding where these files are coming from.

✓

Dictionary key and label are in the correct format and retrieves 40 key-value pairs.
e.g:- {'Poodle_07956.jpg': ['poodle'], 'fox_squirrel_01.jpg': ['fox squirrel'] ... }

Well done!!

✓

'in_arg.dir' is passed as an argument inside check_images.py while calling the get_pet_labels function.

Nice implementation of the `get_pet_labels()` function. And, the argument passed in parameter of this function is reasonable.

Classifying Images

✓

Appends images_dir to each value before making the function call.

classifier(images_dir+users_key, model)

Great work here!👏🏼

✓

Convert the output to lower case and strip any whitespaces

The `lower()` and `strip()` functions do the required work.

Suggestions

The `lower()` et `strip()` functions are among the string methods. Here is a document that presents other string methods with some good examples.

- String Methods Part 1

Note that you have used the required functions, but the above document is only provided for more information on string methods.

✓

Appends 1 to correct label, and 0 to falsely classified values

Your work appends `1` to correct label, and `0` to falsely classified values. Great!

Classifying Labels as Dogs

✓

Check the displayed output and see if all matches are appropriately displayed.

All matches are appropriately displayed in the display output. Good job!

✓

Check the displayed output and see if all non matches are appropriately displayed

All non-matches are appropriately displayed in the display output. 🖼️:+1:

Results

✓

All three models score as expected.

Great work! All models score as expected. 🎉

```
CNN Model: alexnet
Number of Images: 40
Number of Dog Images: 30
Number of "Not-a" Dog Images: 10
% Correct Dogs: 100.0
% Correct Breed: 80.0
% Correct "Not-a" Dog: 100.0
% Match: 75.0
Misclassified Breed's of Dog: [boston terrier] is classified as [basenji]
Misclassified Breed's of Dog: [golden retriever] is classified as [afghan hound, afghan]
Misclassified Breed's of Dog: [beagle] is classified as [english foxhound]
Misclassified Breed's of Dog: [great pyrenees] is classified as [kuvasz]
Misclassified Breed's of Dog: [beagle] is classified as [walker hound, walker foxhound]
Misclassified Breed's of Dog: [golden retriever] is classified as [tibetan mastiff]
--------------------------------------------------------------------------------------
--------------------------------------------------------------------------------------
CNN Model: resnet
Number of Images: 40
Number of Dog Images: 30
Number of "Not-a" Dog Images: 10
% Correct Dogs: 100.0
% Correct Breed: 90.0
% Correct "Not-a" Dog: 90.0
% Match: 82.5
Misclassified Dogs: [cat] is classified as [norwegian elkhound, elkhound]
Misclassified Breed's of Dog: [great pyrenees] is classified as [kuvasz]
Misclassified Breed's of Dog: [beagle] is classified as [walker hound, walker foxhound]
Misclassified Breed's of Dog: [golden retriever] is classified as [leonberg]
--------------------------------------------------------------------------------------
--------------------------------------------------------------------------------------
CNN Model: vgg
Number of Images: 40
Number of Dog Images: 30
Number of "Not-a" Dog Images: 10
% Correct Dogs: 100.0
% Correct Breed: 93.33333333333333
% Correct "Not-a" Dog: 100.0
% Match: 87.5
Misclassified Breed's of Dog: [great pyrenees] is classified as [kuvasz]
Misclassified Breed's of Dog: [beagle] is classified as [walker hound, walker foxhound]
--------------------------------------------------------------------------------------
```

⬇ DOWNLOAD PROJECT

| 4 | CODE REVIEW COMMENTS | › |

RETURN TO PATH

Rate this review

★ ★ ★ ★ ★