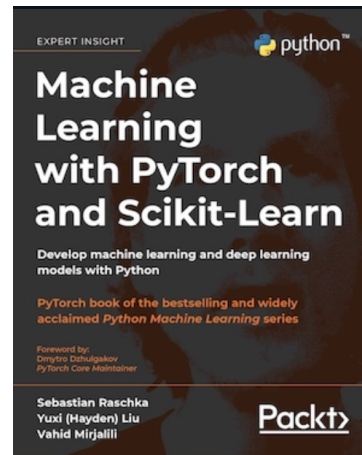


Running Examples Accompanying the Book  
<https://github.com/rasbt/machine-learning-book#machine-learning-with-pytorch-and-scikit-learn-book>  
by Sebastian Raschka et al.  
on Google Colaboratory



Zbynek Bazanowski, Aug 10, 2023

# Troubles resulting from a straight upload

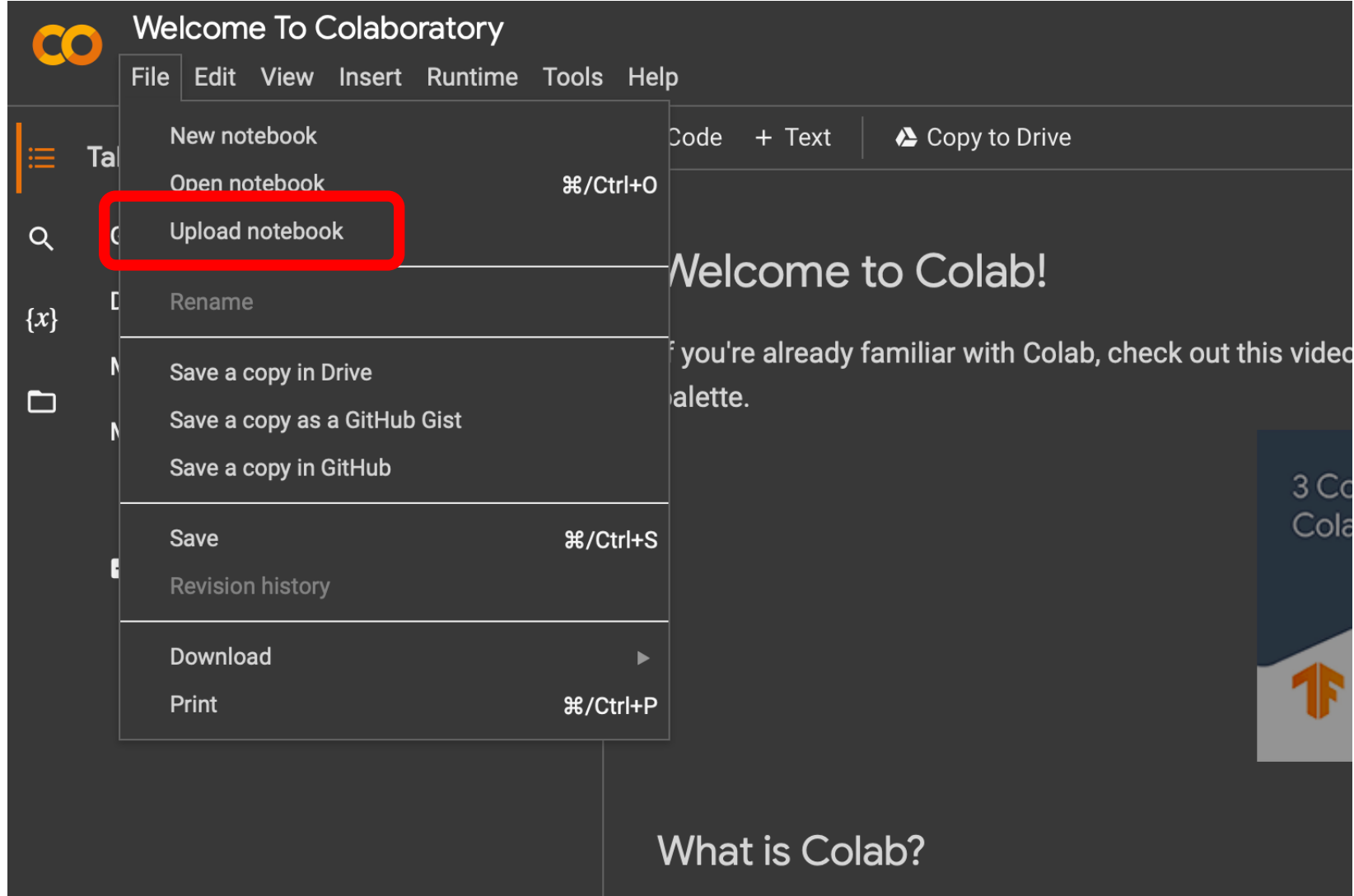
- If you simply upload a notebook to Colab, you will experience some inconvenience.
- Since the **uploaded instance of the Notebook is unrelated to your local storage**, you will need to manually save your changes by downloading the updated notebook from Colab back to your local storage at the end of each Colab session.
- You also need to manually **upload all data** you are using in your experiments.
- At the end of each session, you need to download each part of the data you have changed on Colab if **you want to have your local version in sync with the results of your Colab session**.
- You also need to **upload all figures** if you want to see them in the Notebook cells.
- Also, you need to take care of modules in the main directory like **python\_environment\_check.py**.

# Prerequisites

- Google account
- Google Drive with a copy of the book's repository in it

## (A) Solution (one of many)

- Use **Google Drive (cloud)** as your “local” storage.
- **Colab offers mounting your Google Drive** instance to your Colab session.
- Now, your Colab session has read/write access to everything you need for your experiments.
- As you are working right on your own Google Drive repository copy, there is no need for manual uploads or downloads. **All is perfectly in sync.**
- However, two extra cells need to be added to the header of every Jupyter Notebook if you want to enjoy the same experience as if running locally.



Colab Features

Examples










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 <a href="#">Copy of ch04.ipynb</a>	Zbynek Bazanowski	August 8	August 8	 



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Files



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sample\_data



+ Code + Text

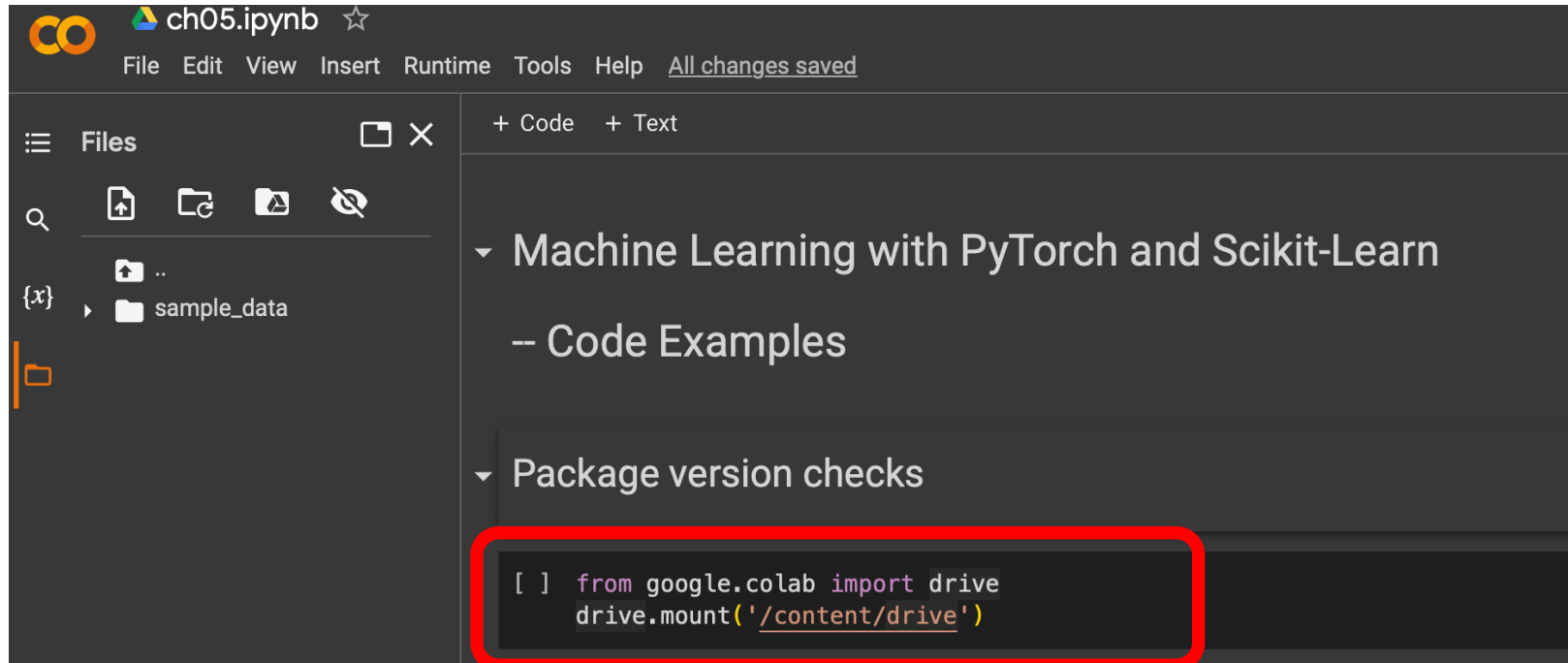
▼ Machine Learning with PyTorch and S

-- Code Examples

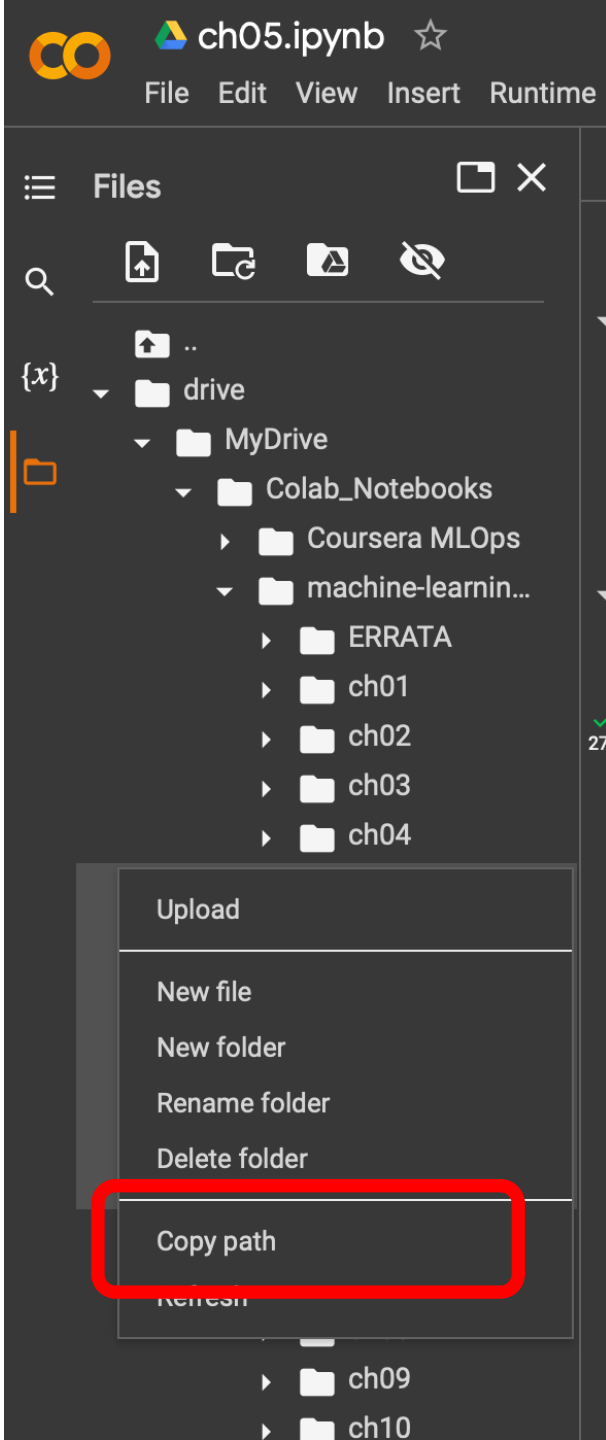
▼ Package version checks

Add folder to path in order to load from the check\_packages






This cell was added automatically by Colab.  
Run it to get you Google Drive mounted.  
You will be requested to grant access to your Google Drive.



You need the path to the folder you are experimenting on.






Example:

`/content/drive/MyDrive/Colab_Notebooks/machine-learning-book-main/ch05/`

 ch05.ipynb ☆

File Edit View Insert Runtime Tools Help [All changes saved](#)

Files



{x}

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drive

MyDrive

Colab\_Notebooks

Coursera MLOps

machine-learning-book-main

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ch01

ch02

ch03

ch04

ch05

figures

README....

ch05.ipynb


+ Code + Text

Machine Learning with PyTorch and Scikit-Learn

-- Code Examples

Package version checks

27s



```
from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive

[ ]

```
import os
os.chdir('/content/drive/MyDrive/Colab_Notebooks/machine-learning-book-main/ch05/')

```

Insert and run this cell to set the current working directory.  
This ensures correct relative paths to figures, data, and python\_environment\_check.py

## Package version checks

```
✓ 27s [1] from google.colab import drive  
drive.mount('/content/drive')
```

Mounted at /content/drive

```
✓ 0s [2] import os  
os.chdir('/content/drive/MyDrive/Colab_Notebooks/machine-learning-book-main/ch05/')
```

Add folder to path in order to load from the check\_packages.py script:

```
✓ 0s [3] import sys  
sys.path.insert(0, '..')
```

Check recommended package versions:

```
✓ 2s [4] from python_environment_check import check_packages
```

```
d = {  
    'numpy': '1.21.2',  
    'matplotlib': '3.4.3',  
    'sklearn': '1.0',  
    'pandas': '1.3.2'  
}  
check_packages(d)
```

```
[OK] Your Python version is 3.10.12 (main, Jun 11 2023, 05:26:28) [GCC 11.4.0]  
[OK] numpy 1.23.5  
[OK] matplotlib 3.7.1  
[OK] sklearn 1.2.2  
[OK] pandas 1.5.3
```

# Happy experimenting



With correct setting of the working directory:

```
✓ 0s [2] import os  
      os.chdir('/content/drive/MyDrive/Colab_Notebooks/machine-learning-book-main/ch05/')
```

Relative path enables correct access to the figures.

```
✓ 1s Image(filename='figures/05_01.png', width=400)
```

