

Lectures on Multivariable Mathematics: Codespace Basics

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1 Objectives

2 Getting Setup in Github

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After this lesson you should:

- 1 Create a GitHub account

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- 3 Be able to start and “use” a Codespace

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- 2 “Fork” the class repository
- 3 Be able to start and “use” a Codespace
- 4 Be able to “commit” repository changes

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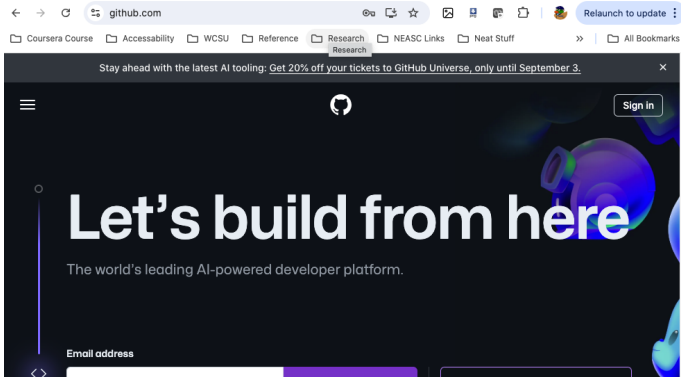
- 1 Create a GitHub account
- 2 “Fork” the class repository
- 3 Be able to start and “use” a Codespace
- 4 Be able to “commit” repository changes
- 5 Be able to shutdown an unused Codespace

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1 Objectives

2 Getting Setup in Github

Github

Sign up for a Github Account (<https://github.com>)

Math for Machine Learning Repository

Go to the class repository

([https://github.com/cfroccajr/
Mathematics-for-Machine-Learning.git](https://github.com/cfroccajr/Mathematics-for-Machine-Learning.git))

and make a copy of it by “forking” the main branch.

Issues Pull requests Agents Actions Projects Wiki Security and quality Insights Settings

Mathematics-for-Machine-Learning Public

Pin Watch 0 Fork 0

main 1 Branch 0 Tags

Go to file T Add file <> Code

File/Folder	Description	Time
.devcontainer	Initial commit	last week
data	Copied files from previous Repo	yesterday
notebooks	Rename submissions/rocca/Basic_Linear_Rocca.ipynb to n...	20 hours ago
submissions	Rename submissions/rocca/Basic_Linear_Rocca.ipynb to n...	20 hours ago

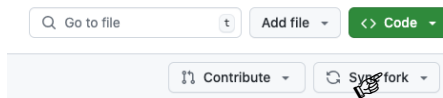
About

This repository will have assignments and projects for students taking a course in Mathematics for Machine Learning.

Readme MIT license Activity 0 stars

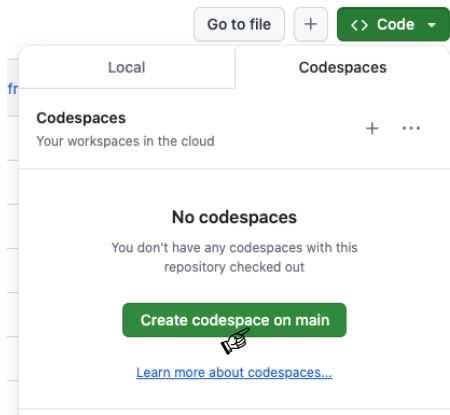
Math for Machine Learning Repository

By creating a fork you can synchronize your copy with the original.



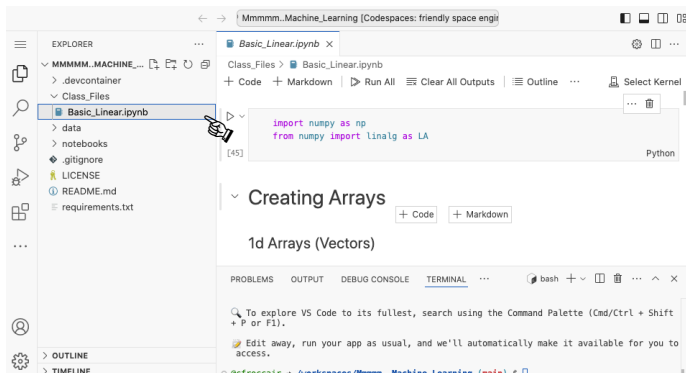
Starting a Codespace

Click on Code - Codespaces - Create codespace on main



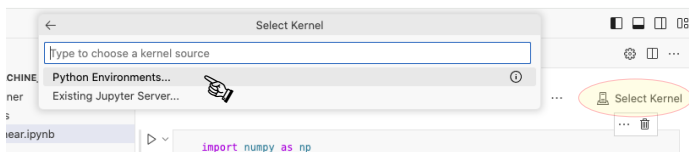
In the Codespace

The Codespace is a virtual machine where we will run Python in Jupyter Notebooks



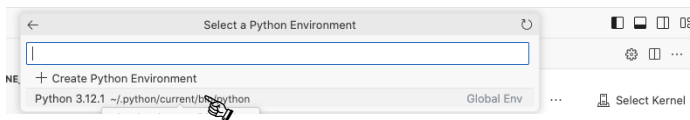
In the Codespace

To execute (run) the Notebook, you need to choose a kernel.



In the Codespace

To execute (run) the Notebook, you need to choose a kernel.



Running the Notebook

With the kernel started you can run commands in the notebook.

Class_Files > Basic_Linear.ipynb > ...

+ Code + Markdown | ▶ Run All ↺ Restart ☰ Clear All Outputs | Variables Outline ...

▶ ▼

```
import numpy as np
from numpy import linalg as LA
```

[1] ✓ 0.0s

▼ **Creating Arrays**

+ Code + Markdov

1d Arrays (Vectors)

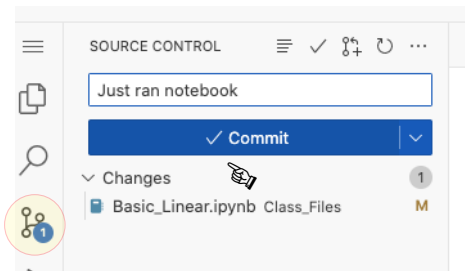
```
np.array([1,7,9,0]) # Creates a 1x4 array of specific values
```

[2] ✓ 0.0s

... array([1, 7, 9, 0])

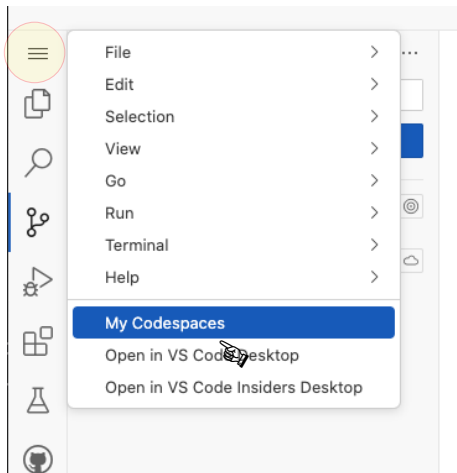
“Saving Changes”

You save changes by Committing them to the repository. You should select “Commit and Sync” from the drop down menu.



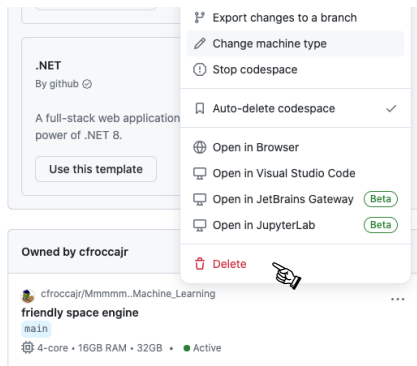
Closing Up the Codespace

When you are ready to be done choose My Codespaces from the menu



Closing Up the Codespace

Then click on the three dots next to the Codespace and click delete



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