

Lectures on Multivariable Mathematics: Codespace Basics

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1 Objectives

2 Getting Setup in Github

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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

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

Stay ahead with the latest AI tooling: [Get 20% off your tickets to GitHub Universe, only until September 3.](#)

Sign in

Let's build from here

The world's leading AI-powered developer platform.

Email address

Create your GitHub account

Verify your email address

Math for Machine Learning Repository

Go to the class repository
 (https://github.com/cfroccajr/Mmmmm..Machine_Learning)
 and make a copy of it by “forking” the main branch.

cfroccajr / Mmmmm..Machine_Learning

<> Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Mmmmm..Machine_Learning Public

generated from [github/codespaces-jupyter](https://github.com/codespaces-jupyter)

Pin Unwatch 1 Fork 0 Star 0

main

Go to file + <> Code About

cfroccajr Merge pull request #4 from cfroccajr/development 370a47e · 2 days ago

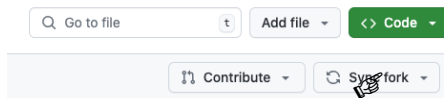
.devcontainer	Initial commit	2 days ago
Class_Files	This is the first class demonstration ...	2 days ago
data	Initial commit	2 days ago
notebooks	Initial commit	2 days ago

This repository is for class/lab files for a class in Multivariable Mathematics for Machine Learning

Readme MIT license Activity etare

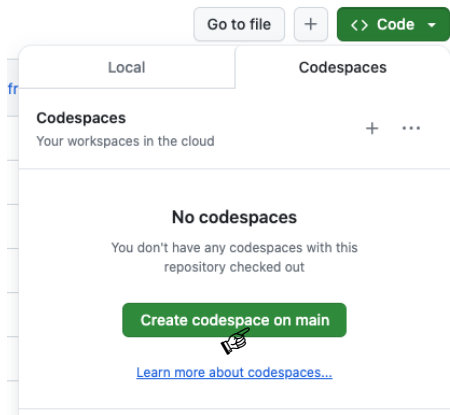
Math for Machine Learning Repository

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



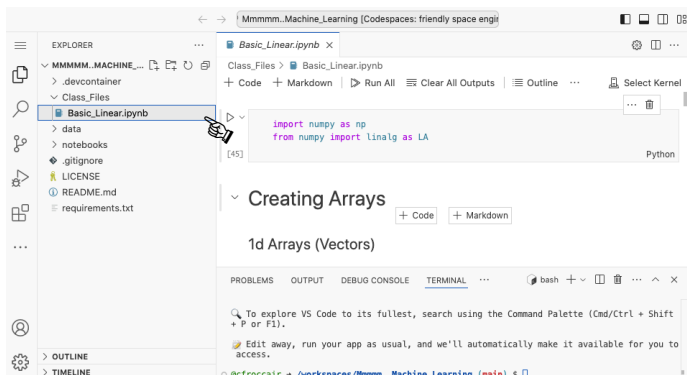
Starting a Codespace

Click on Code - Codespaces - Create codespace on main



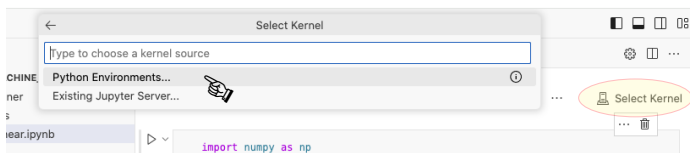
In the Codespace

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



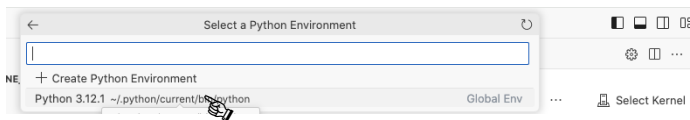
In the Codespace

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



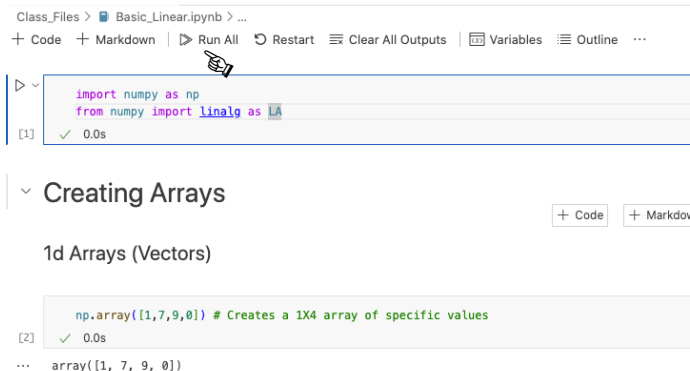
In the Codespace

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.



The screenshot shows a Jupyter Notebook interface. At the top, the file path is 'Class_Files > Basic_Linear.ipynb > ...'. Below this are navigation buttons: '+ Code', '+ Markdown', '▶ Run All', '↺ Restart', '☰ Clear All Outputs', '📄 Variables', '☰ Outline', and '...'. A hand cursor points to the 'Run All' button. Below the navigation bar is a code cell with the following code:

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

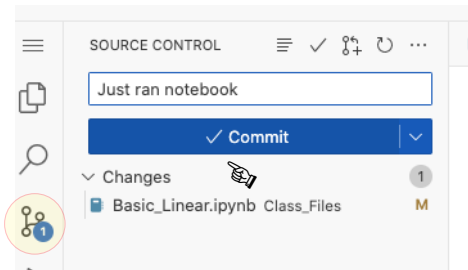
The cell output is '[1] ✓ 0.0s'. Below the code cell is a section header 'Creating Arrays' with a dropdown arrow on the left. To the right of the header are buttons '+ Code' and '+ Markdov'. Underneath the header is the sub-section '1d Arrays (Vectors)'. Below this is another code cell with the following code:

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

The cell output is '[2] ✓ 0.0s'. Below the code cell is the output '... array([1, 7, 9, 0])'.

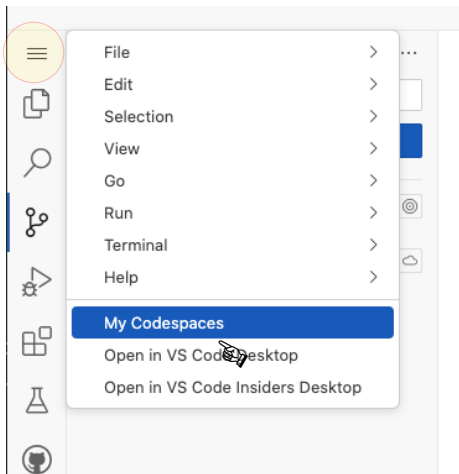
“Saving Changes”

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

The screenshot shows a GitHub Codespace interface. On the left, there is a template card for ".NET" by github, described as "A full-stack web application power of .NET 8." with a "Use this template" button. Below this, it says "Owned by cfroccejr". The main area shows a codespace named "friendly space engine" by user "cfroccejr/Mmmmm..Machine_Learning" on the "main" branch. The codespace is "Active" and has "4-core • 16GB RAM • 32GB". A context menu is open over the three dots next to the codespace name, listing several actions: "Export changes to a branch", "Change machine type", "Stop codespace", "Auto-delete codespace" (checked), "Open in Browser", "Open in Visual Studio Code", "Open in JetBrains Gateway" (Beta), "Open in JupyterLab" (Beta), and "Delete". A hand cursor is pointing at the "Delete" option.

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