

# PANDAS WORKSHOP

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LEVERAGING PYTHON TO YOUR  
NEEDS

Data Science and Informatics  
Marielle Doenges



Github Repository



**01**

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## **ABOUT US**

How you can get involved with the DSI club at UF

**02**

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## **WHY PANDAS**

Applications of Pandas in the real world and its origin.

**03**

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## **PRACTICAL**

Interactive tutorial with Python code in Jupyter Notebook



**01**

# ABOUT US

How you can get involved





DSI discord

## WHY JOIN DSI

### **Apply Data Science Skills**

- Workshops
- Project Opportunities

### **Career Building**

- Resume Building
- Career and Interview Prep
- Guest Speakers from Different Industries

### **Community**

- Interact with Peers
- Socials





**02**

# **WHY PANDAS**

Applications and history

# BENEFITS OF PANDAS

## **Rich Functionality:**

Built-in functions for common data operations, reducing the need for custom code.  
Integrates well with other popular Python libraries (e.g., Matplotlib for plotting).

## **Versatility:**

Handles data of different formats: CSV, Excel, SQL, and many others.  
Supports various data operations: filtering, aggregation, transformation.

## **Efficiency:**

Optimized for performance, making it quick even on large datasets.  
Uses memory efficiently with its DataFrame structure.

## **Flexibility:**

Can reshape and pivot data with ease.  
Supports merging and joining datasets.



Image generated with DALLE3

# POPULARITY

## Origin:

"Pandas" stands for "Panel Data" – a term for data that is observed over time for the same subjects.

## Growing Popularity:

One of the most preferred and used data analysis tools in Python.

Large community: means better support, more resources, and continuous development.

## Wide Adoption:

Used in finance, academia, marketing, ...

Companies like Google, JP Morgan, and Dropbox use Pandas.

## Open-Source & Python Integration:

Integrates well with other libraries and tools.

Open-source means it's free to use and benefits from community contributions.



Image generated with DALLE3





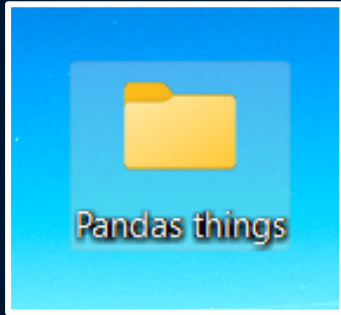
**03**

# TUTORIAL

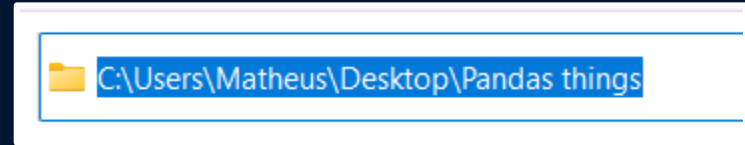
What you came here for!

# Create a folder for the Workshop

(It can be anywhere you want within your computer)



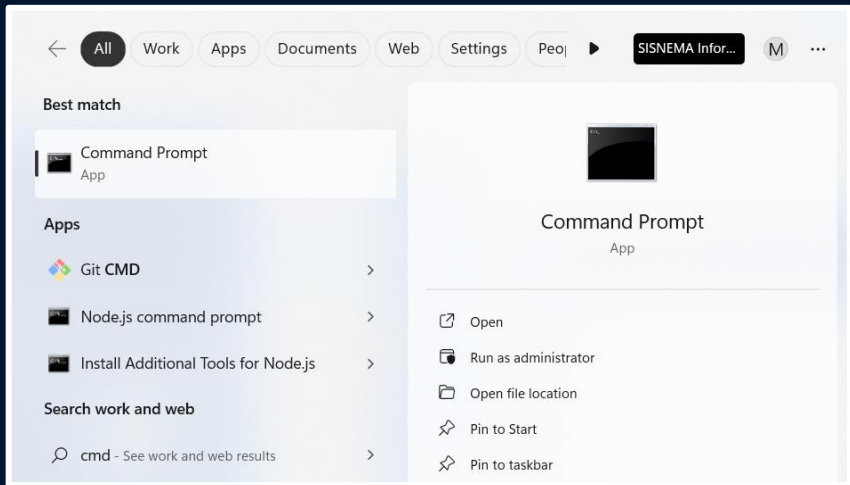
Folder created in desktop



Double click the folder and copy its file path

# Launch the Terminal

We promise we won't delete your graphics card



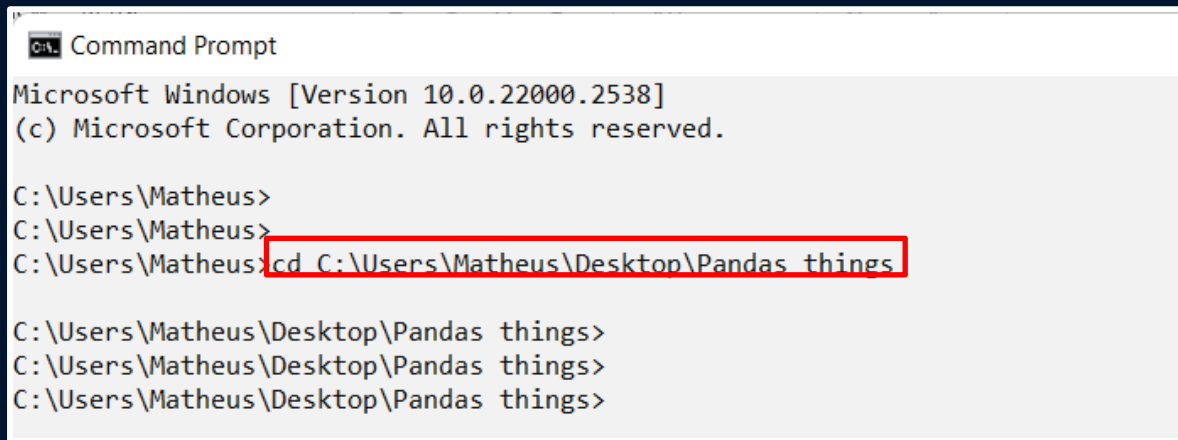
Open your respective OS terminal

How your terminal should look



# Run the following commands (1)

This will tell the computer where you want to save the workshop material



```
Command Prompt
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Matheus>
C:\Users\Matheus>
C:\Users\Matheus>cd C:\Users\Matheus\Desktop\Pandas things
C:\Users\Matheus\Desktop\Pandas things>
C:\Users\Matheus\Desktop\Pandas things>
C:\Users\Matheus\Desktop\Pandas things>
```

“cd <paste the file path you copied before>”



# Run the following commands (2)

This will download the materials to your newly created folder

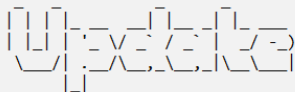
```
C:\Users\Matheus\Desktop\Pandas things>git clone https://github.com/matheusmaldaner/WorkshopArchive
Cloning into 'WorkshopArchive'...
remote: Enumerating objects: 83, done.
remote: Counting objects: 100% (34/34), done.
remote: Compressing objects: 100% (19/19), done.
remote: Total 83 (delta 20), reused 14 (delta 14), pack-reused 49
Receiving objects: 100% (83/83), 1.93 MiB | 3.13 MiB/s, done.
Resolving deltas: 100% (28/28), done.
```

“git clone <link to github repository>”

# Run the following commands (3)

This will start the Jupyter notebook. Remember to keep the terminal open!

```
C:\Users\Matheus\Desktop\Pandas things> jupyter notebook
```



Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions.

[https://jupyter-notebook.readthedocs.io/en/latest/migrate\\_to\\_notebook7.html](https://jupyter-notebook.readthedocs.io/en/latest/migrate_to_notebook7.html)

Please note that updating to Notebook 7 might break some of your extensions.

```
[I 15:28:10.283 NotebookApp] The port 8888 is already in use, trying another port.
[I 15:28:10.289 NotebookApp] Serving notebooks from local directory: C:\Users\Matheus\Desktop\Pandas things
[I 15:28:10.290 NotebookApp] Jupyter Notebook 6.5.4 is running at:
[I 15:28:10.291 NotebookApp] http://localhost:8889/?token=465e7079a002d9f808b162ba3d448091b5636550d10b6884
[I 15:28:10.292 NotebookApp] or http://127.0.0.1:8889/?token=465e7079a002d9f808b162ba3d448091b5636550d10b6884
[I 15:28:10.294 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 15:28:10.388 NotebookApp]
```

To access the notebook, open this file in a browser:

file:///C:/Users/Matheus/AppData/Roaming/jupyter/runtime/nbserver-36984-open.html

Or copy and paste one of these URLs:

<http://localhost:8889/?token=465e7079a002d9f808b162ba3d448091b5636550d10b6884>

or <http://127.0.0.1:8889/?token=465e7079a002d9f808b162ba3d448091b5636550d10b6884>

0.00s - Debugger warning: It seems that frozen modules are being used, which may

0.00s - make the debugger miss breakpoints. Please pass -Xfrozen\_modules=off

0.00s - to python to disable frozen modules.

0.00s - Note: Debugging will proceed. Set PYDEVD\_DISABLE\_FILE\_VALIDATION=1 to disable this validation.

■

“jupyter notebook”

# THANKS!

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Do you have any questions?

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- [@uf\\_dsi](#)



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