Welcome to Data Science Online Bootcamp

Day 0

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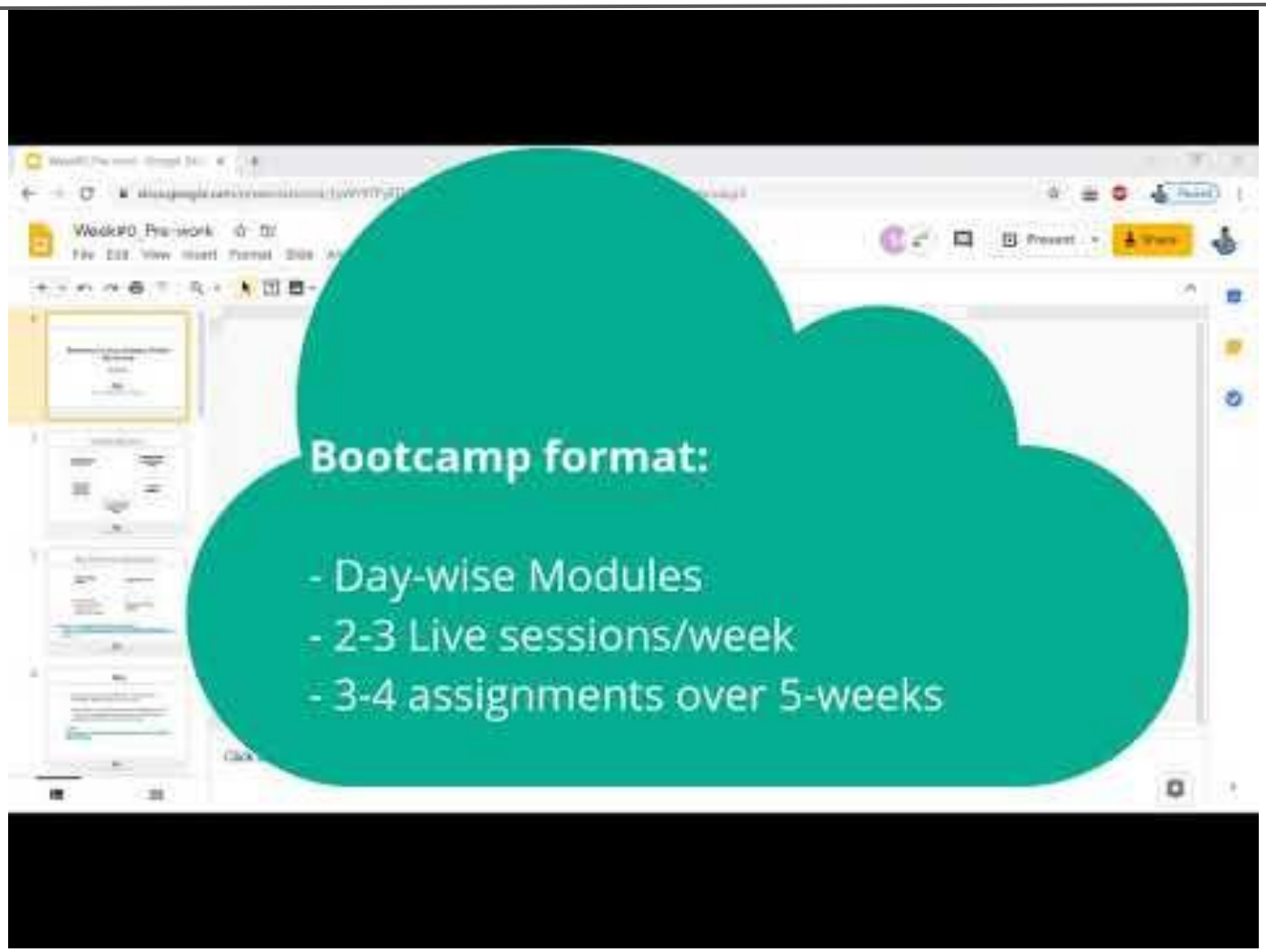
Democratizing Data Science Learning

Intro Video


Bootcamp format:
- Day-wise Modules
- 2-3 Live sessions/week
- 3-4 assignments over 5-weeks

Learning Objectives

1. Why Python for Data Science?

2. Google Colab - Running Python Online

3. Python & Anaconda installation

4. Jupyter notebook

5. Print your first program **“Hello World”**

Why Python for Data Science?

Free and open source

Great community

70K+ libraries - allows to automate most things with simple lines of code

Easy and intuitive to use

What to learn more why python is best? Read the below articles

- https://www.cbtnuggets.com/blog/technology/data/why-data-scientists-love-python
- https://www.kdnuggets.com/2018/05/poll-tools-analytics-data-science-machine-learning-results.html

Note

- **Data Science is not about Python, R, Excel, Jupyter Notebook, Google Colab etc or any tool**

- **Data Science is using above tools and techniques, and if required inventing new tools and techniques, to solve a problem using "data" in a "scientific" way.**

Credits:
https://www.linkedin.com/feed/update/urn:li:activity:6667326207958372352/

Python and Google Colab

- Python - you know by now it is a programming language.
- Now what is Google Colab and Colab Notebook?
- We are humans and always need user-friendly applications. So Google offers Google Colab notebooks (also called as online version of Jupyter notebook) that is **easy-to-use and interactive data science environment.**
  - Not just that, Google colab offers you upto 25 GB ram/GPU etc **for free** and 100 GB storage.
  - So, you don't need to worry about installing a bulky python local application on your laptop/computer
- **Google colab registration:** https://colab.research.google.com/

Online Environment to Run Python Code

There seems to some issue with visibility in the video with print function. Print function is usually used as follows print(z) However, in the video it appears to be print.(z). due to screen recording issue, so please use the correct one i.e print(z)

If you have good internet connection and are comfortable using google colab, then just jump to slide #15. Else, follow rest of the slides to install python and anaconda on your computer/laptop

What is Anaconda and Jupyter Notebook?

- Python - you know by now it is a programming language. Now what is Anaconda?

- Anaconda is a free and open-source distribution of Python. In nutshell it makes your life easy to run python code on your laptop/computer.

- Again why Anaconda? - C'mon we are humans and we need user-friendly applications. So Anaconda offers a powerful tool called "Jupyter notebook" which is **easy-to-use and interactive data science environment.**

Install Python and Anaconda (Windows)

- **Step1:** Install Python
  - Direct download link: https://www.python.org/downloads/
  - **Video instructions:** https://www.youtube.com/watch?v=bnhQBUEpWlg

- **Step 2:** Download and install Anaconda here: https://docs.anaconda.com/anaconda/install/windows/
  - **Video instructions:** https://www.youtube.com/watch?v=4PpAdWFc5Fo

Note: Please feel free to **avoid step 12** in the link, which is optional.

For Ubuntu/Linux Users

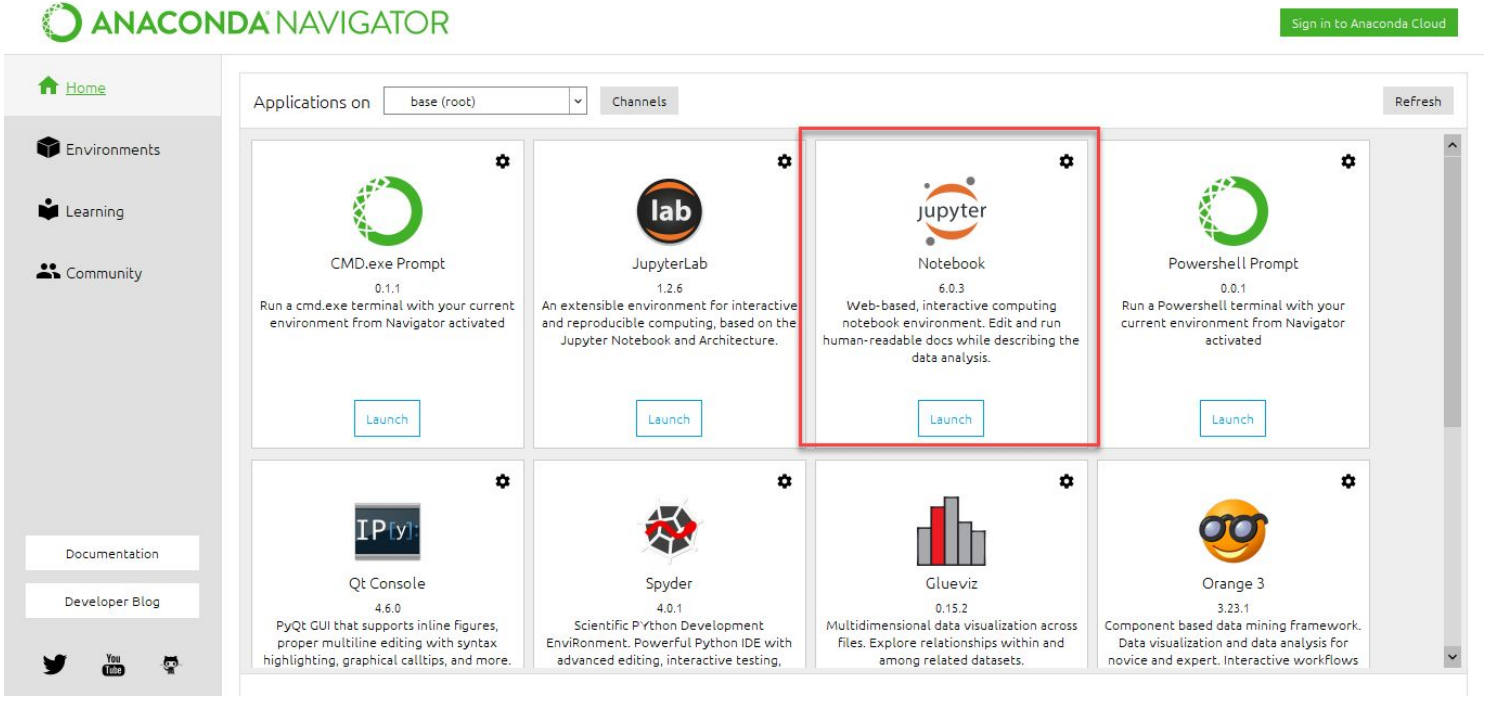
- https://docs.anaconda.com/anaconda/install/mac-os/
- https://docs.anaconda.com/anaconda/install/linux/

For stepwise guided process:

- https://www.datacamp.com/community/tutorials/installing-anaconda-mac-os-x
- https://www.digitalocean.com/community/tutorials/how-to-install-the-anaconda-python-distribution-on-ubuntu-18-04

Now Let's Open Anaconda Navigator

- You will be able to see the below screen once you open the recently installed "anaconda navigator" application.
- If you can't find the navigator icon in your menu, you can type anaconda-navigator in command line.
- Click "Launch" under Jupyter Notebook in anaconda navigator in order to open a notebook in your default web browser.

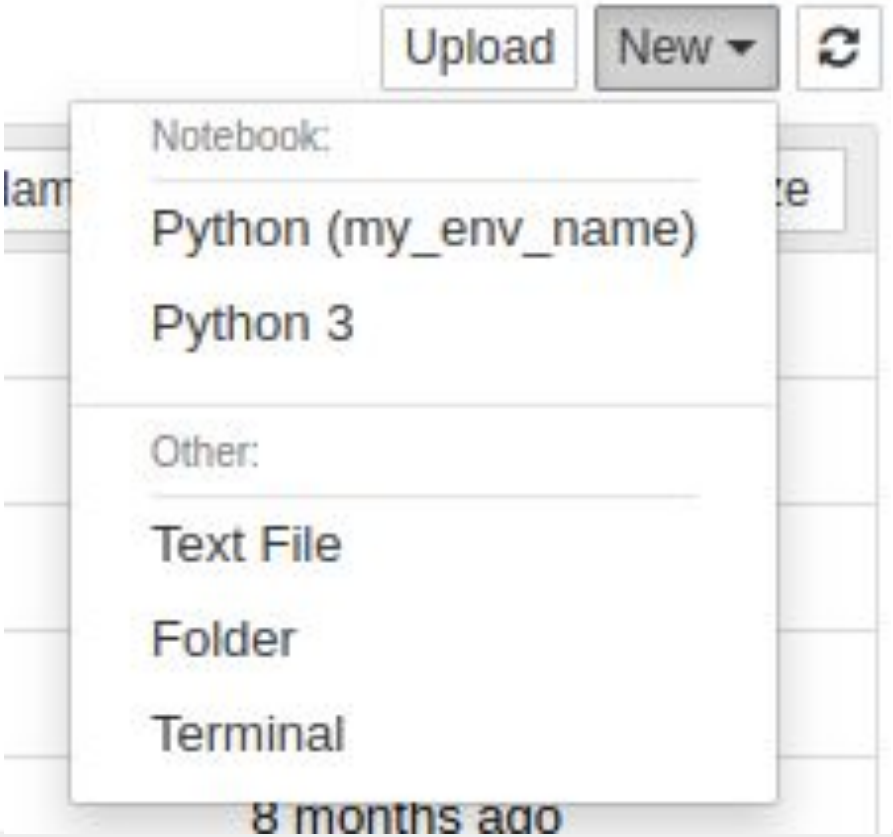


Jupyter Interface

- This is what the basic jupyter interface looks like!
- No files might be displayed if your folder is empty.

Create a New Notebook

- To create a new notebook, go to New at the top right corner and select Notebook - Python 3.



Exercises

Try it out!

- **Create your first program:**
  Type print ("hello world") in the blank cell.

  - **Shortcut to run code** “shift + enter” (jupyter) or “Ctlr+enter” (colab)
  - You’ll see an output *Hello World* below the cell.

- Now you can use your notebook as a calculator and perform basic operations like additions, subtraction etc by running the following commands:
  5+7
  2-3

  See we told you, python is easy! It is by far simplest programming for humans.

That’s it for the day. Thank you!

Feel free to post any queries in the **#help** channel on Slack