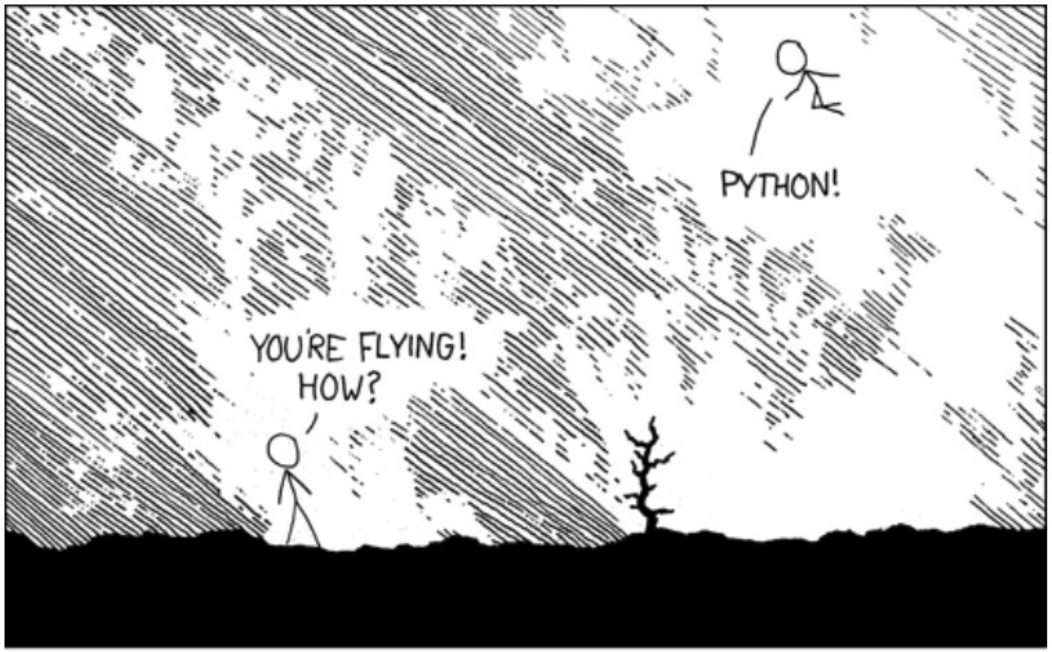
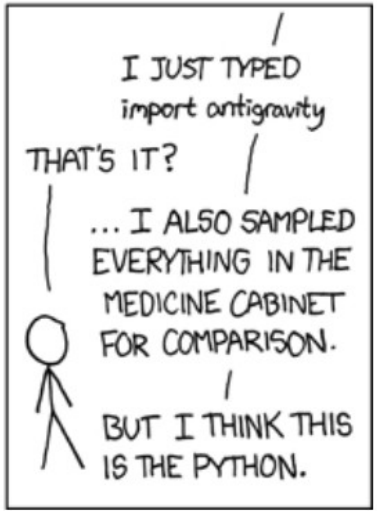
Let’s python!

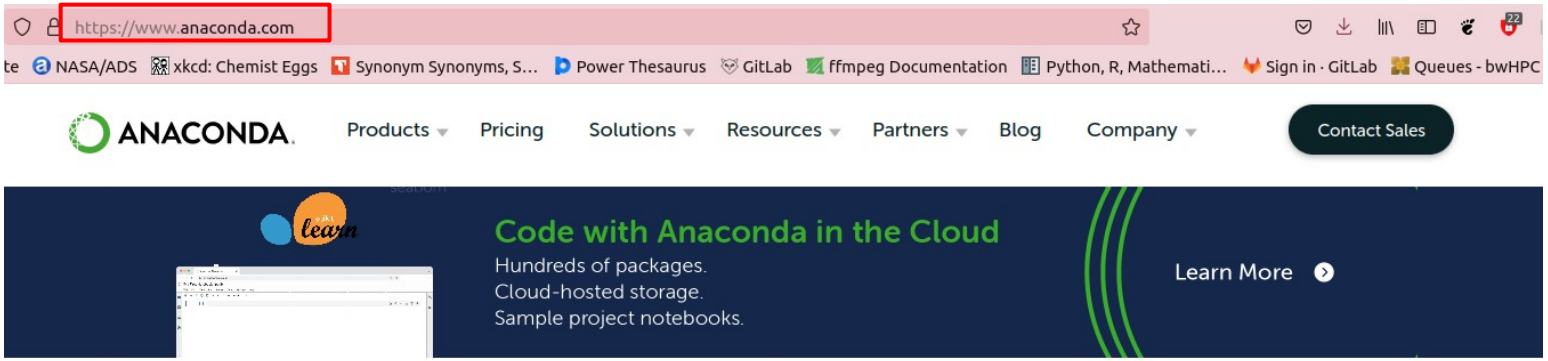
Trainers:

- S. Ataiee: use python since 2012 for data analysis
- M. Feizzadeh: learned python in 2019 to create game application
- M. Tamam: speaks python since 2020
- Z. Yousefi: obsessed with python since 2021 and use it for web application





How to start?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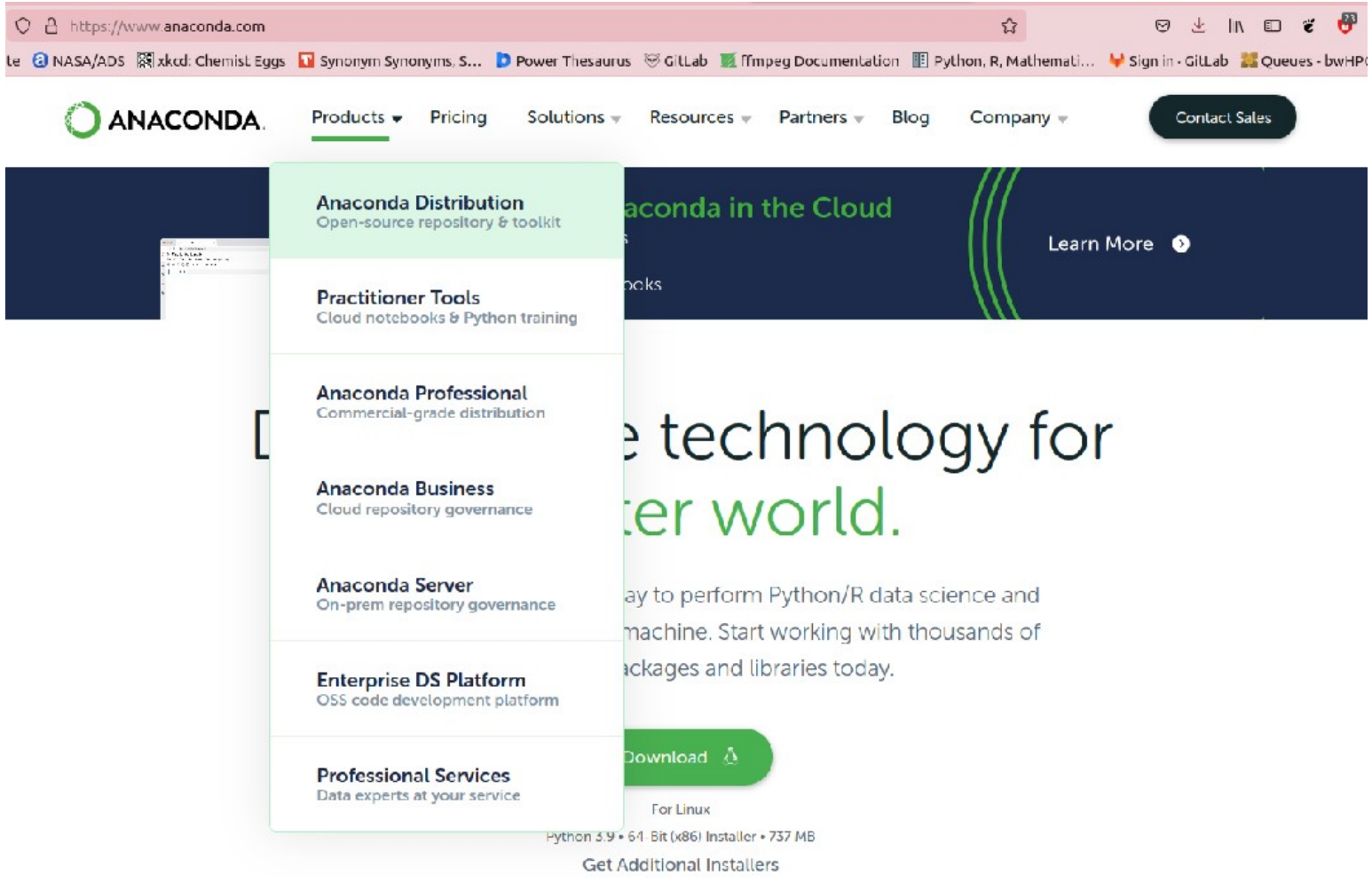
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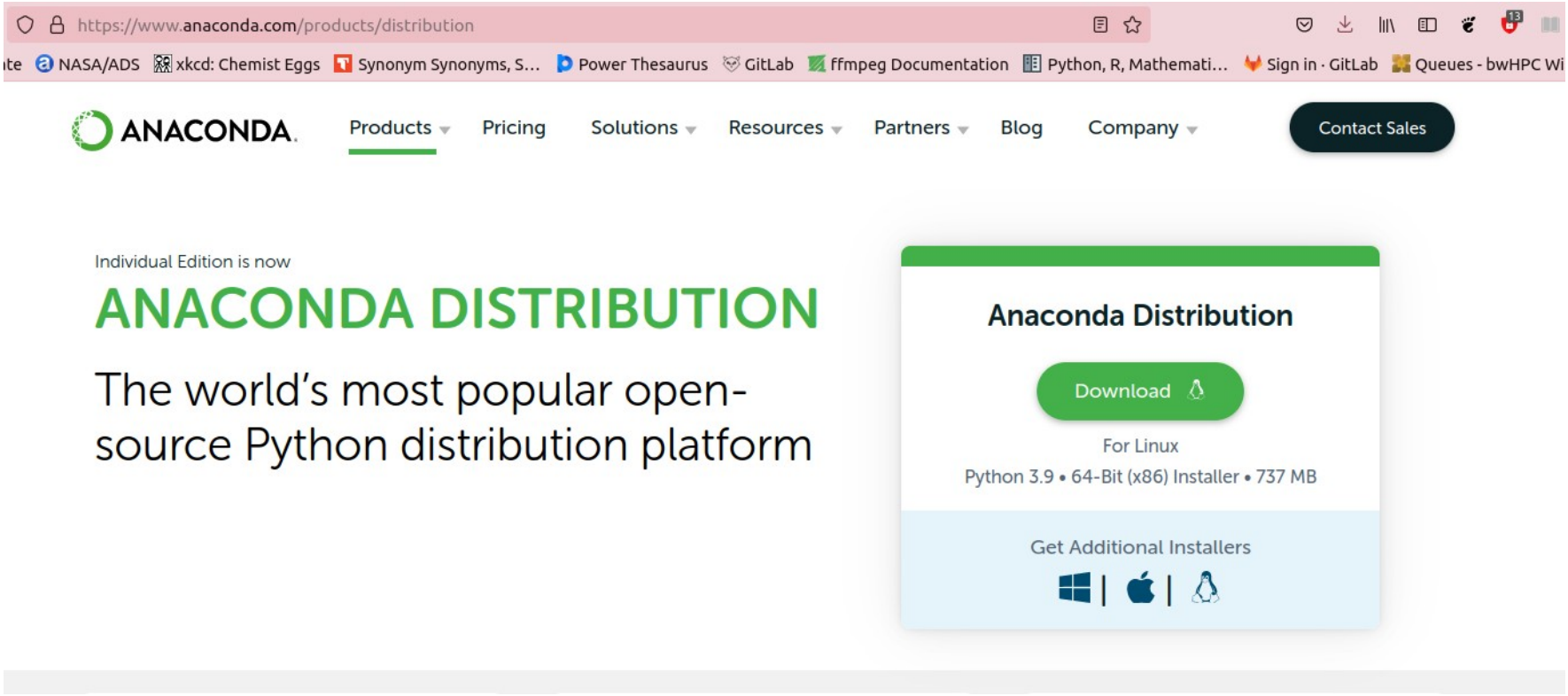
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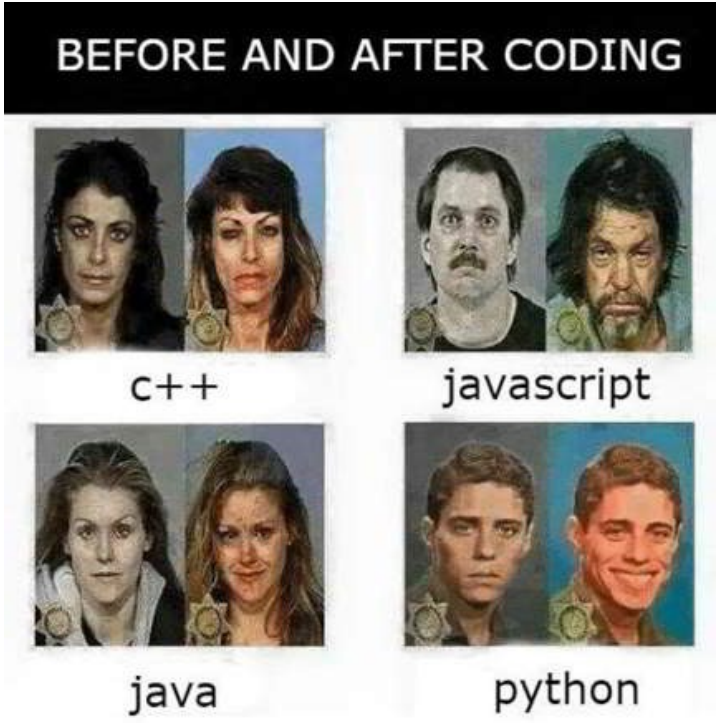
What is python?

What is python?

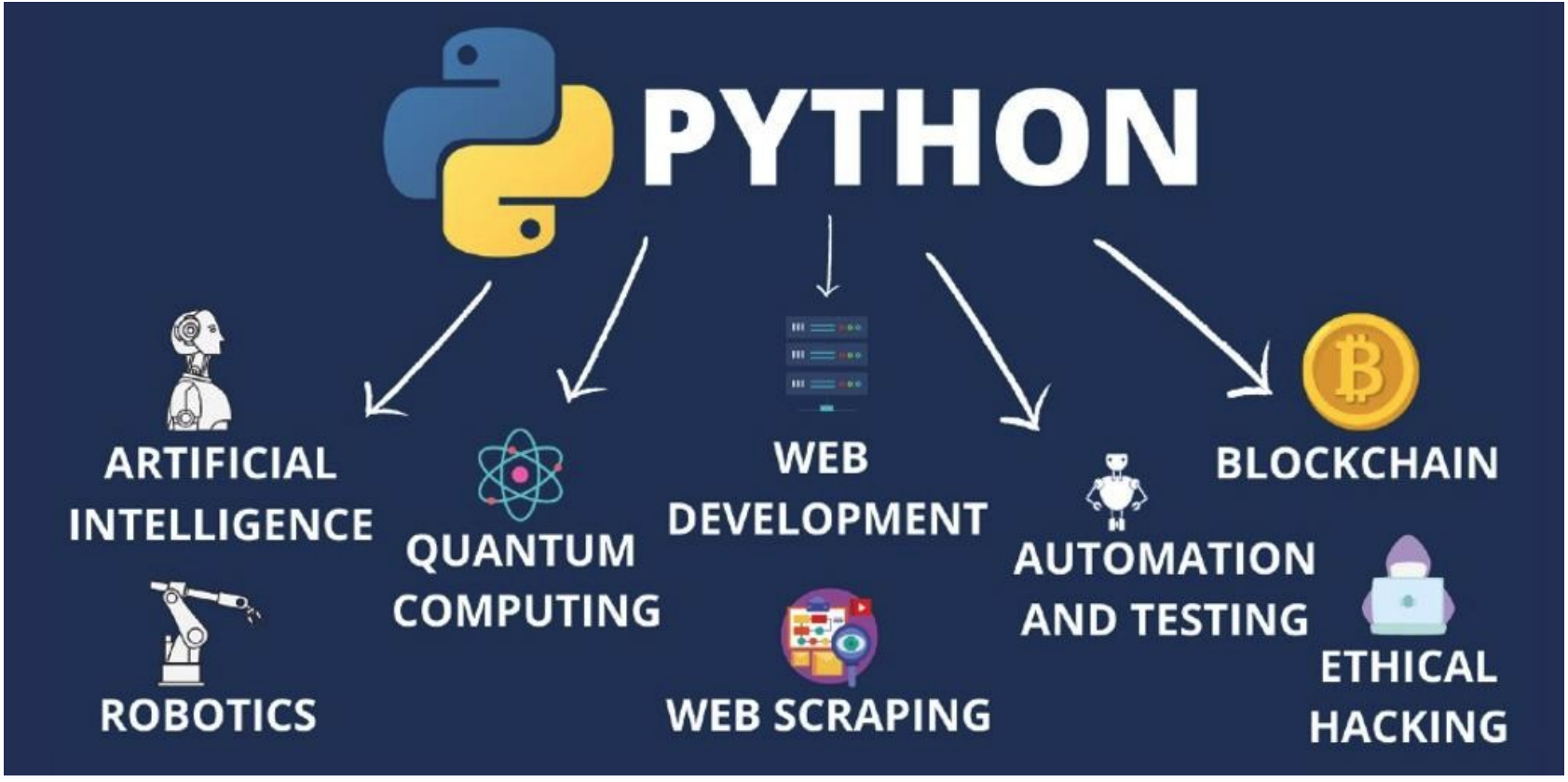
A programming language implemented by Guido van Rossum and released first in 1991.

Why python?

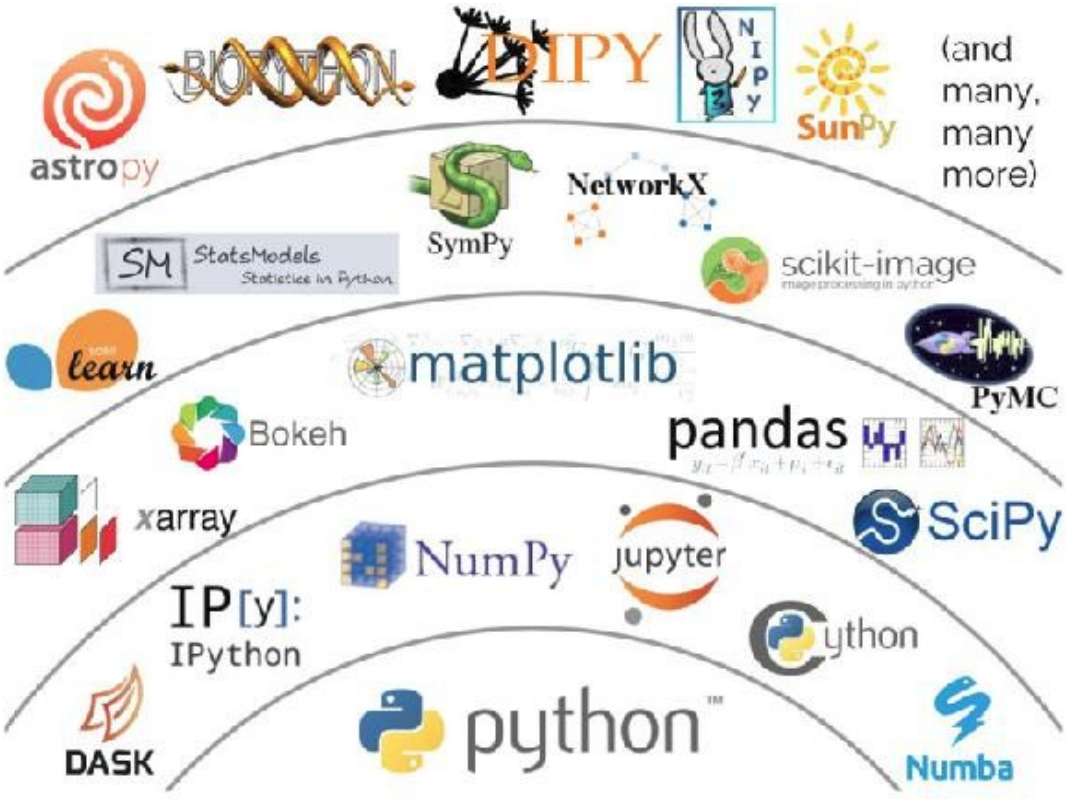
- is free!
- is easily readable and relatively simple
- is comprehensively documented
- has support for object-oriented programming and functional programming
- has many user-created libraries which one can download and use them
- is an interpreted language meaning that code can be executed as soon as it is written



Python application



Python application in science

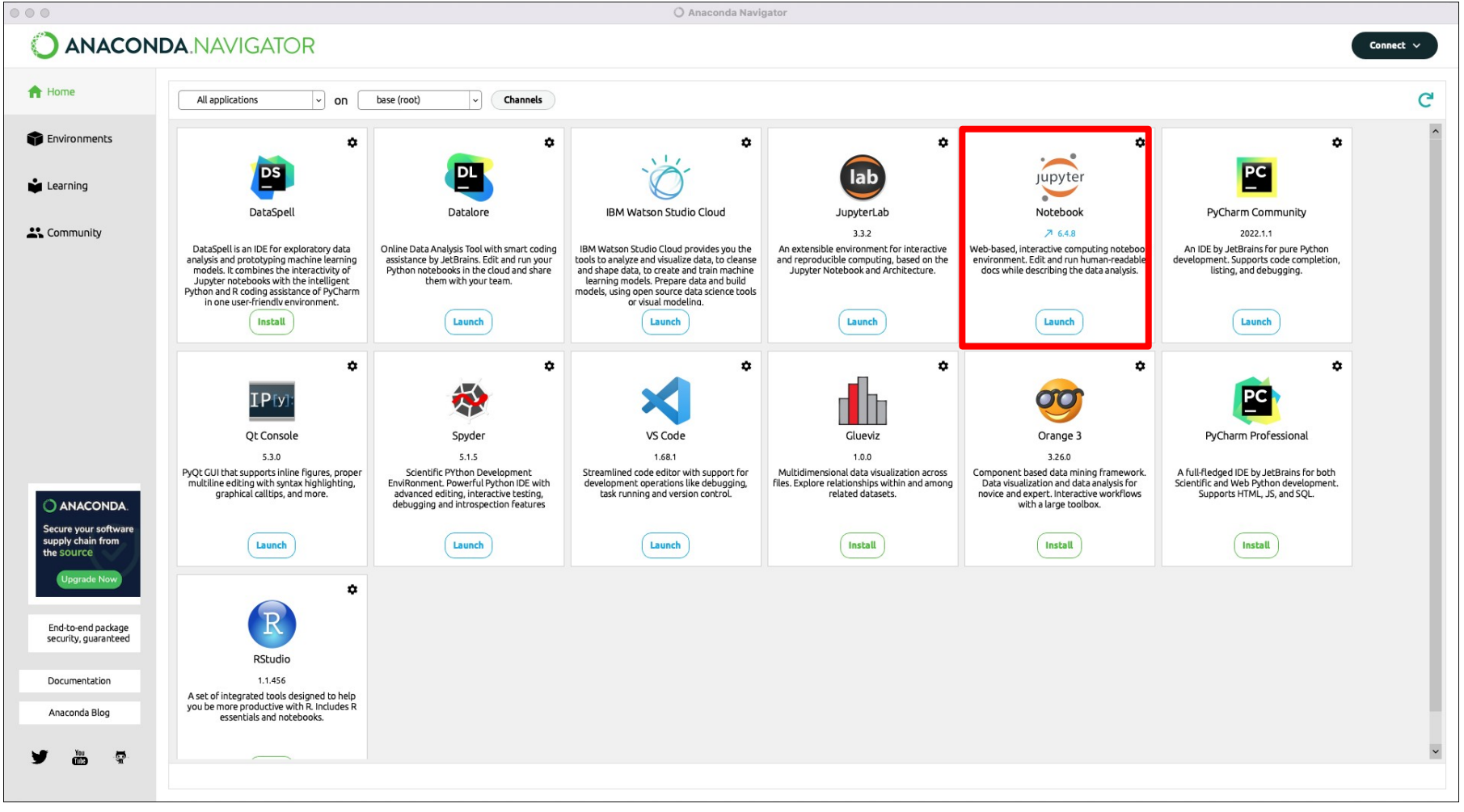



LET'S GET
STARTED!
makeameme.org

Anaconda navigator

- Save day1.ipynb (sent by email) somewhere in your computer
- Open anaconda-navigator
- Open Jupyter notebook
- Click on day1.ipynb

Anaconda navigator



jupyter

Quit Logout

Files Running Clusters

Select items to perform actions on them.

Upload New

0 /	Name	Last Modified	File size
atm_retrival		8 days ago	
bin		2 years ago	
Calibre Library		a month ago	
Desktop		11 days ago	
Documents		2 months ago	
Downloads		a day ago	
Dropbox		a day ago	
ebooks		a month ago	
fargo3d		2 years ago	
footext		6 months ago	
LightCurve		a month ago	
MachineLearning		25 days ago	
Music		a year ago	

Attention!

- Jupyter is an atmosphere that eases the programming (IDE).
- A python program is a file written in python and saved with a .py extension.
- A python program written in Jupyter has the .ipynb extension (but can be also convert to .py).

Solver.py

```
1   import math
2
3
4   class Solver:
5
6       def demo(self, a, b, c):
7           d = b ** 2 - 4 * a * c
8           if d > 0:
9               disc: float = math.sqrt(d)
10              root1 = (-b + disc) / (2 * a)
11              root2 = (-b - disc) / (2 * a)
12              return root1, root2
13          elif d == 0:
14              return -b / (2 * a)
15          else:
16              return "This equation has no roots"
17
18
19  if __name__ == '__main__':
20      solver = Solver()
21
22      while True:
23          a = int(input("a: "))
24          b = int(input("b: "))
25          c = int(input("c: "))
26          result = solver.demo(a, b, c)
27          print(result)
```