Getting Started With Python

Data Science Study Group

The Boston Python Users
https://www.meetup.com/bostonpython/
https://about.bostonpython.com/slack

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By Matthew Curcio
matt.curcio.ri [@] gmail.com

Getting Started With Python

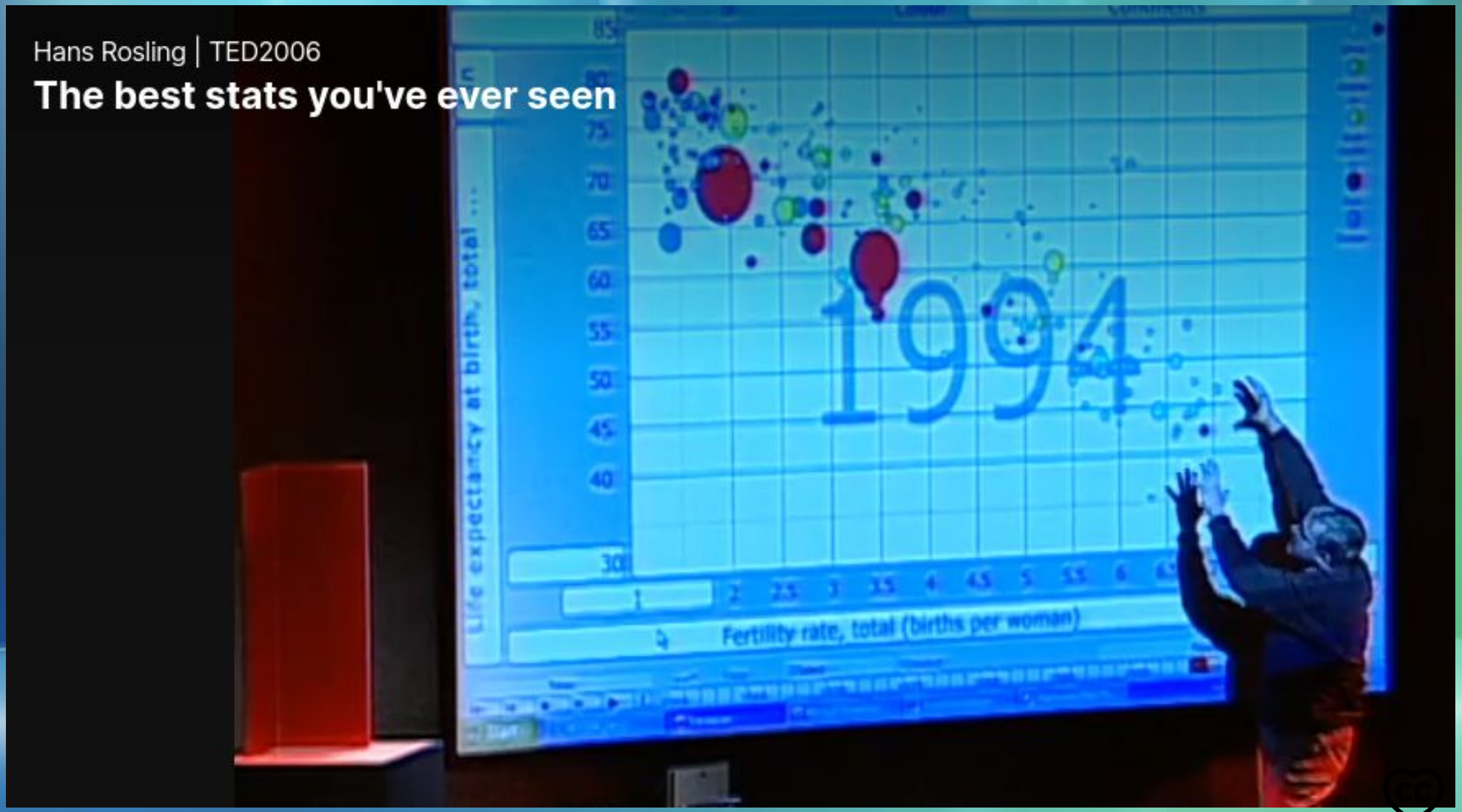
Boston Python Meetup

Data Science Study Group

1. What is Data Science?
2. Data Science Resources
3. Python Resources
4. Where to Find Python
5. Why use Anaconda
6. Installing Anaconda
7. Getting Started w/ Anaconda-Navigator

What is Data Science?

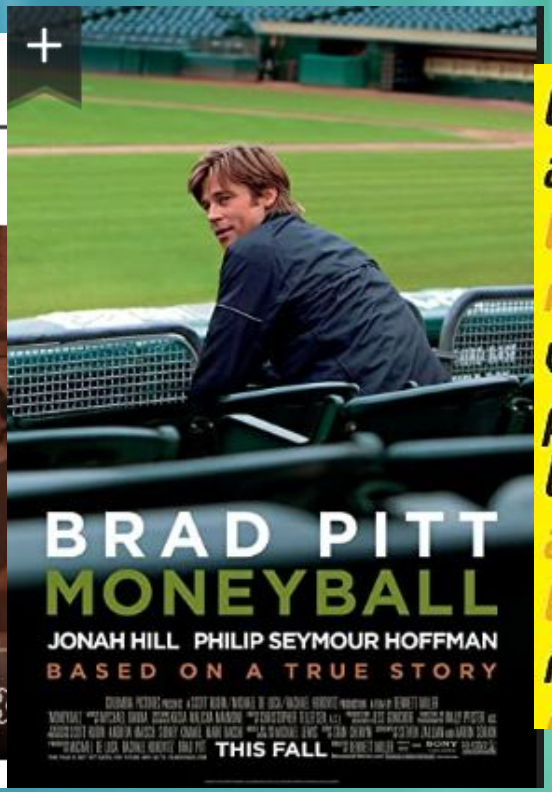
Hans Rosling's - TED talk

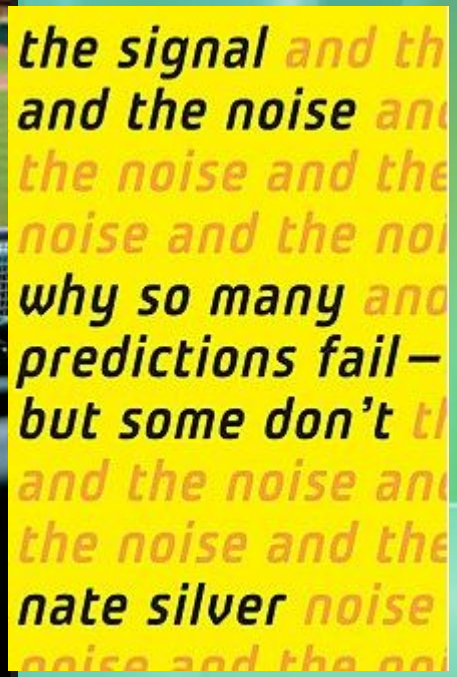


Where else do you we Data Science?

Nate Silver

- Player Empirical Comparison & Optimization Test Algorithm, 2003
- Fivethirtyeight, 2010
- Moneyball, 2011
- The Signal and the Noise, 2012





Data Science Resources

'Matt's opinionated, non-comprehensive & non-authoritative lists'

1. Elements of Statistical Learning, Hastie FREE
2. Machine Learning, H. Daumé, FREE
3. Probabilistic Machine Learning… K. Murphy, FREE
4. Jason Brownlee's - Website/blog
5. Kaggle.com
6. R-bloggers.com
7. Andrew Ng at Stanford U. - Coursera
8. Github - Search 'All Github' for terms of interest

Python Resources

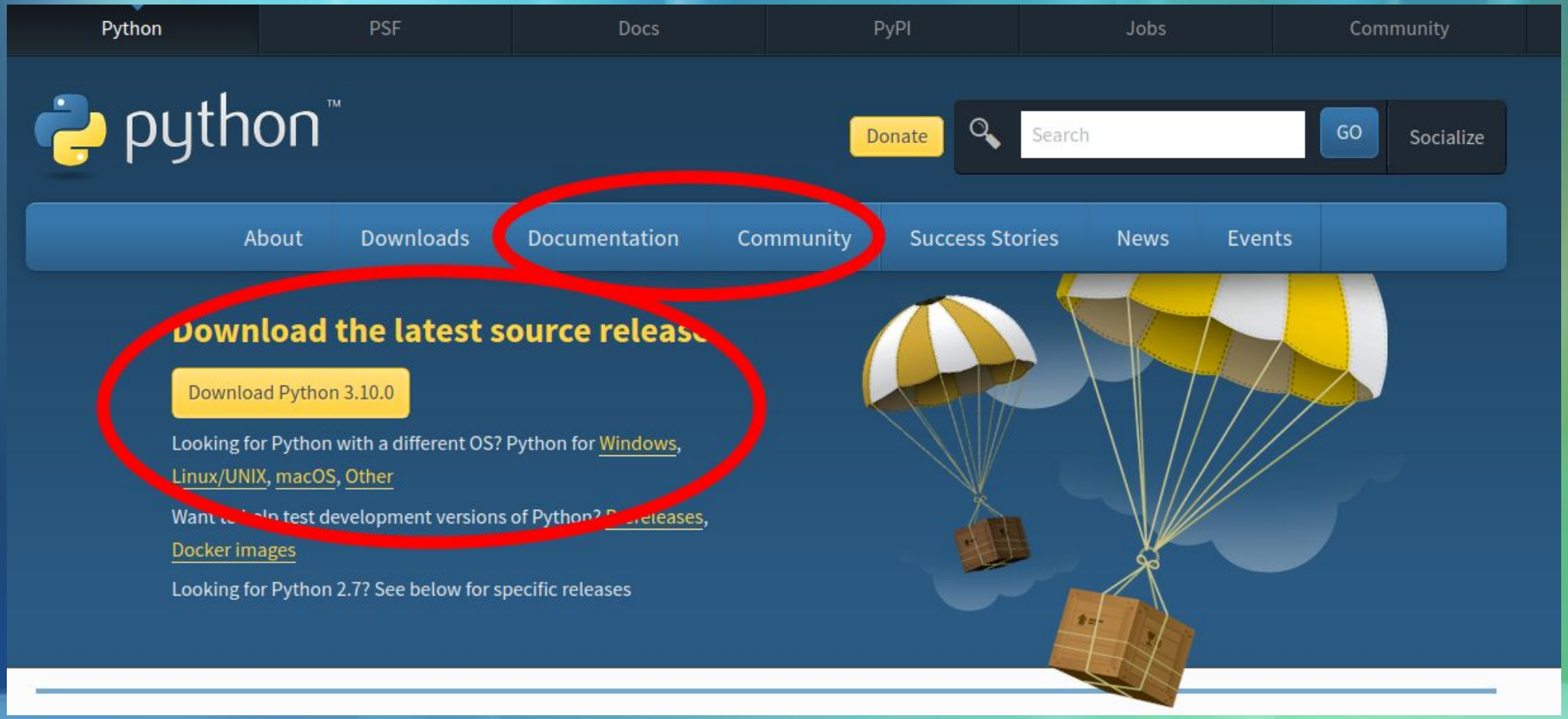
1. Python Documentation - Python.org
2. Py4e (Python For Everybody) - Book & Course FREE
3. FreeCodeCamp - Several Courses FREE
4. EdX - Courses FREE
5. Coursera - Courses FREE
6. Byte of Python - Book FREE
7. Automate the Boring Stuff - Online Book FREE
8. Python D.S. Handbook - Online Book FREE
9. GitHub Repos - `Awesome Python` FREE

Check For Python on your OS

OS	Pre-Loaded	To Find Version In Terminal / Type
Ubuntu/Linux	YES	`python --version` *OR* `python -V`
Mac OSX	YES	
Windows	No	In PowerShell `python -V`

To Find Python

- Python.org - www.python.org/downloads



Python: Easiest Way To Get Started

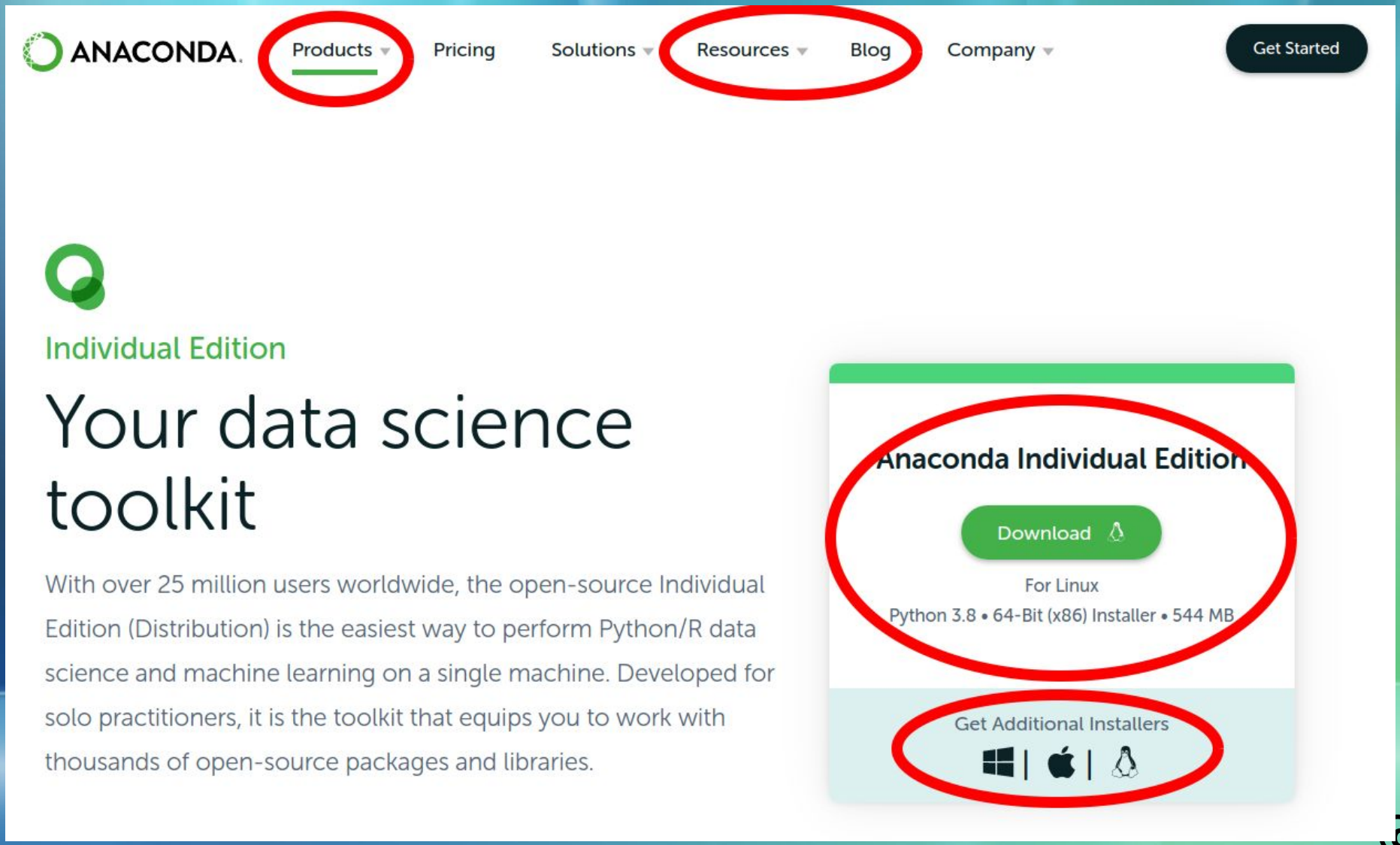
- Anaconda.com - www.anaconda.com
  - *Anaconda is very common.*
  - *Works on Linux, Mac OSX & Windows.*
  - *1,000+ packages are pre-bundled.*
  - *Conda is an environment management system.*
  - *Conda is an open source package management system and environment management system for installing multiple versions of software packages and their dependencies and switching easily between them.*
    https://anaconda.org/anaconda/conda

Why Use Anaconda?

"EASIEST WAY TO GET STARTED"

Install Python via Anaconda:

Landing Page - https://www.anaconda.com/



Install Python via Anaconda

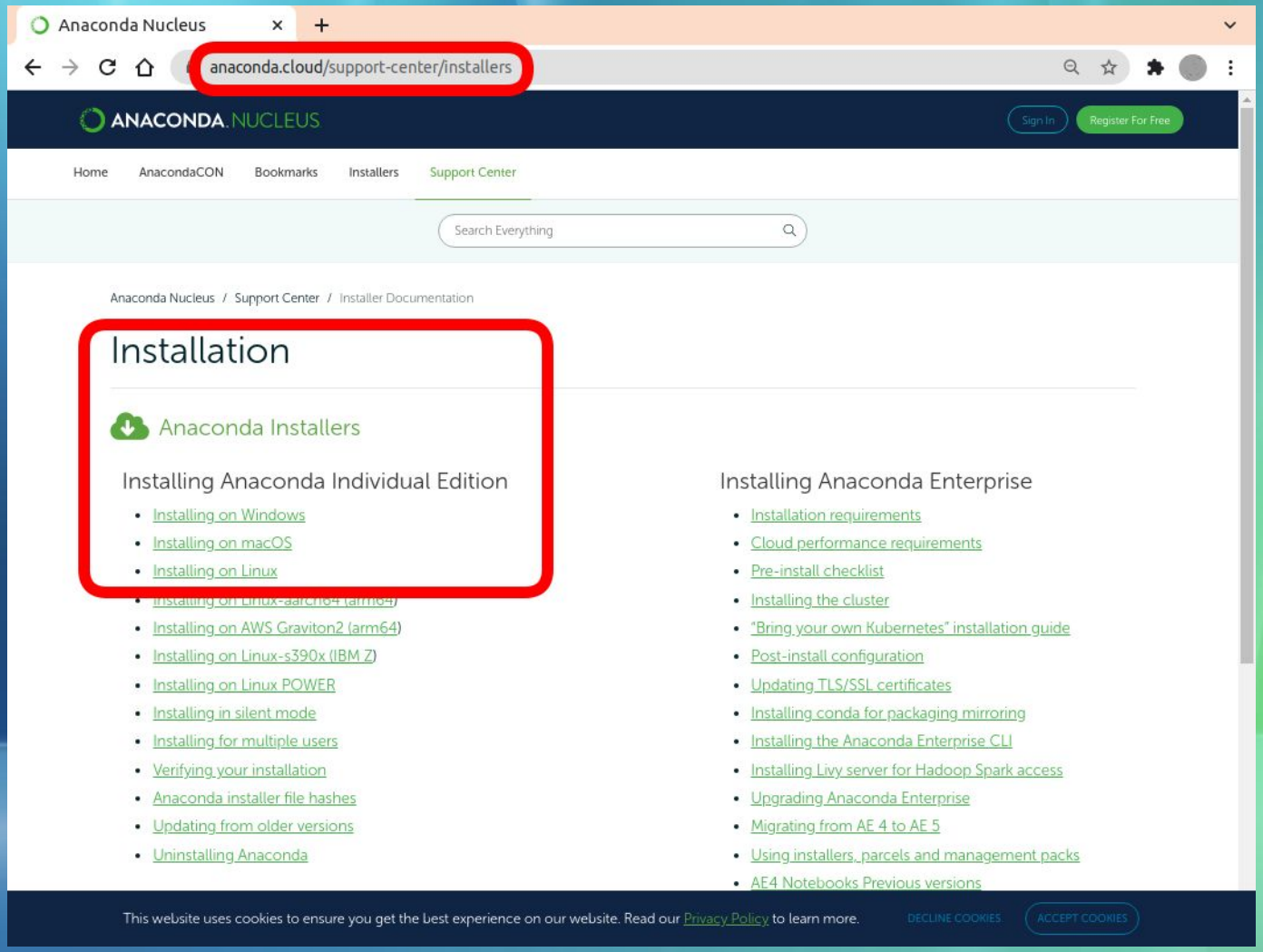
Nr Bottom of Landing Page - https://www.anaconda.com/

In Linux, download to: /home/<user> directory

Install Python via Anaconda

Instructions for different situations

https://anaconda.cloud/support-center/installers/installers



Install Anaconda on Ubuntu

1. Open BASH terminal: <ctrl><alt>+T
2. Ubuntu needs/install:
   sudo apt-get install libgl1-mesa-glx libegl1-mesa libxrandr2 libxrandr2 libxss1 libxcursor1 libxcomposite1 libasound2 libxi6 libxtst6
3. Navigate to Download directory:
   /home $ cd <user>/Download
4. ls # Do you have Anaconda Installation Shell Script, (.sh)
5. Use BASH Interpreter:
   /home/<user> $ bash Anaconda3-2021.05-Linux-x86_64.sh
   NOTE: You don't need root access here!

Watch the Fireworks Fly!

Getting Started with ‘Anaconda-Navigator’

https://conda.io/projects/conda/en/latest/user-guide/getting-started.html

1. Open BASH terminal: <ctrl><alt>+T
2. To update Anaconda

   /home $ conda update conda
3. Proceed ([y]/n)? <enter>
4. To open `Anaconda Navigator`

   /home $ anaconda-navigator

Watch the Fireworks Fly!

Helpful Bash Aliases for Anaconda-Navigator

Add aliases to '/home/<user>/.bashrc'

1. alias jupy='jupyter notebook'
2. alias condaup='conda update --prefix /home/<user>/anaconda3 anaconda'
3. alias navi='conda update --prefix /home/<user>/anaconda3 anaconda --yes && anaconda-navigator'

Install Anaconda on Ubuntu

https://docs.anaconda.com/anaconda/user-guide/getting-started/#open-nav-lin

ANACONDA.DOCUMENTATION

- Home
- Anaconda Individual Edition
  - Installation
  - User guide
    - Getting started with Anaconda
    - Anaconda Navigator
    - Conda
    - Tasks
    - Cheat sheet
    - Frequently asked questions
  - Reference
  - End User License Agreement - Anaconda Individual Edition
- Anaconda Embedded
- Anaconda Commercial Edition
- Anaconda Team Edition
- Anaconda Enterprise 5
- Anaconda Enterprise 4
- Anaconda.org
- Archive

Getting started with Anaconda

Anaconda Individual Edition contains conda and Anaconda Navigator, as well as Python and hundreds of scientific packages. When you installed Anaconda, you installed all these too.

Conda works on your command line interface such as Anaconda Prompt on Windows and terminal on macOS and Linux.

Navigator is a desktop graphical user interface that allows you to launch applications and easily manage conda packages, environments, and channels without using command-line commands.

You can try both conda and Navigator to see which is right for you to manage your packages and environments. You can even switch between them, and the work you do with one can be viewed in the other.

Try this simple programming exercise, with Navigator and the command line, to help you decide which approach is right for you.

When you're done, see What's next?.

Your first Python program: Hello, Anaconda!

Use Anaconda Navigator to launch an application. Then, create and run a simple Python program with Spyder and Jupyter Notebook.

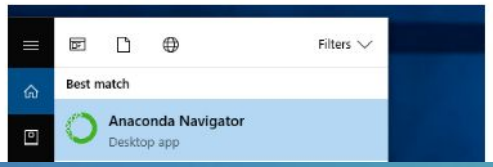
Open Navigator

Choose the instructions for your operating system.

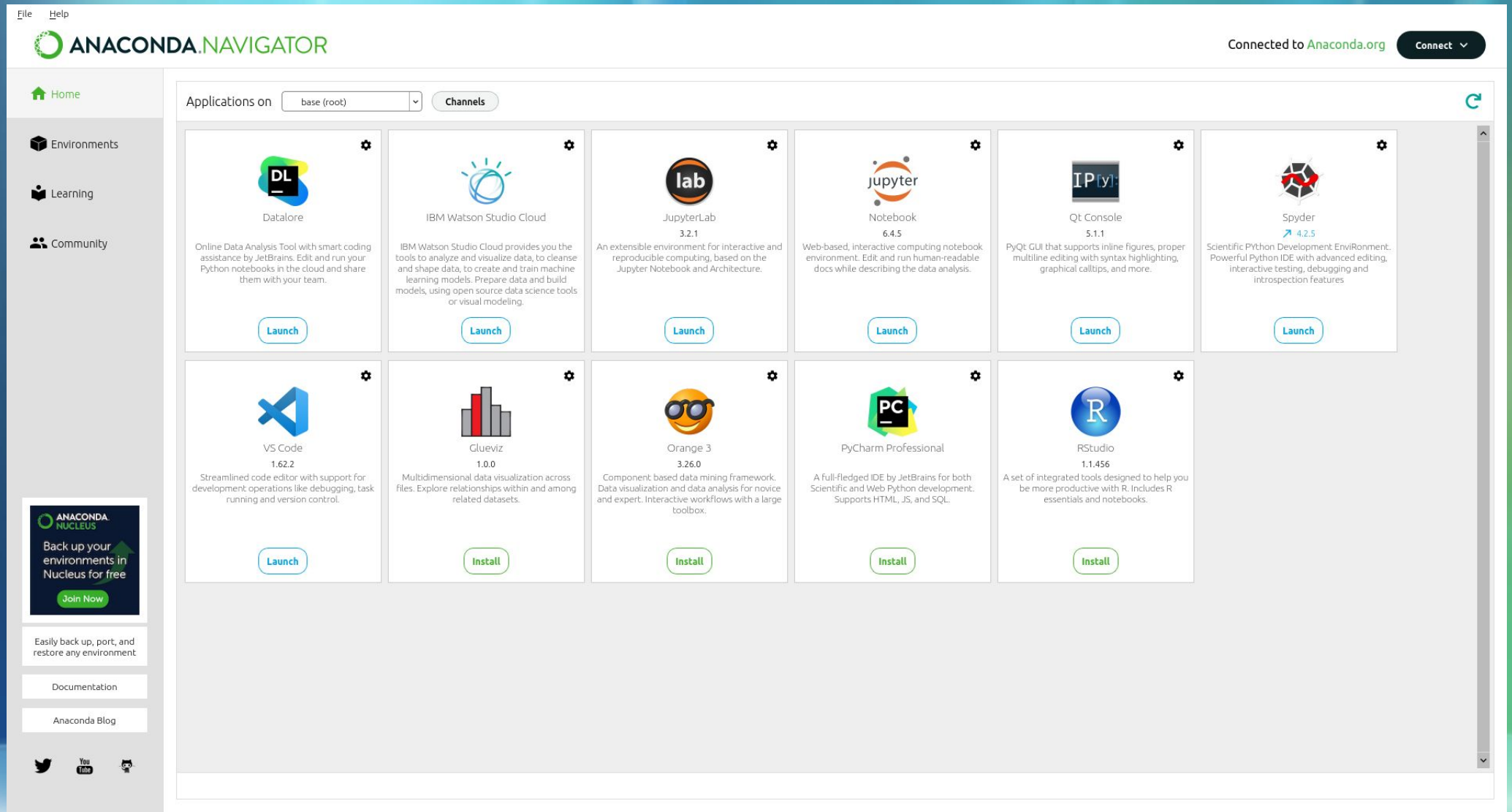
- Windows.
- macOS.
- Linux.

Windows

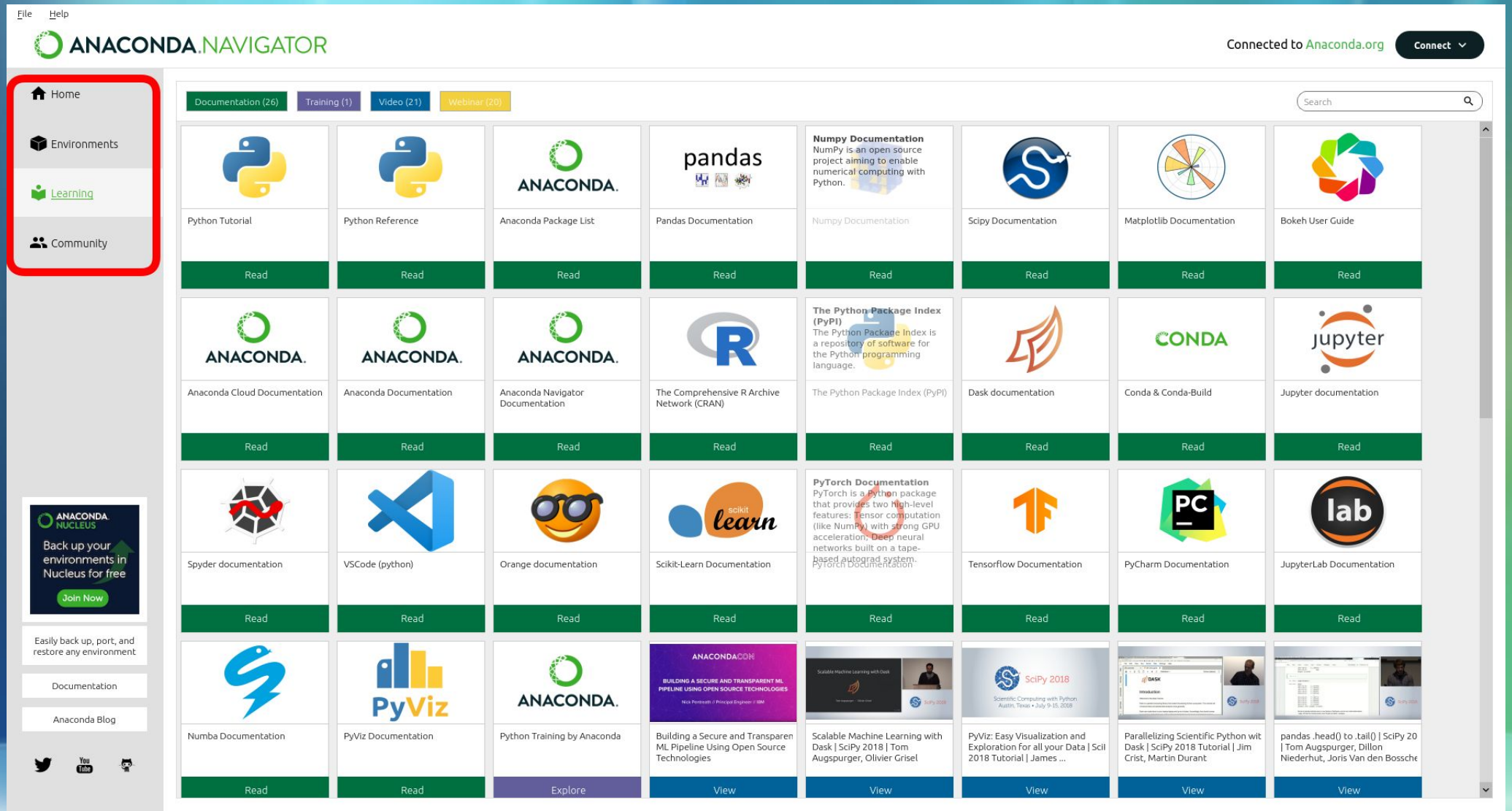
From the Start menu, click the Anaconda Navigator desktop app.



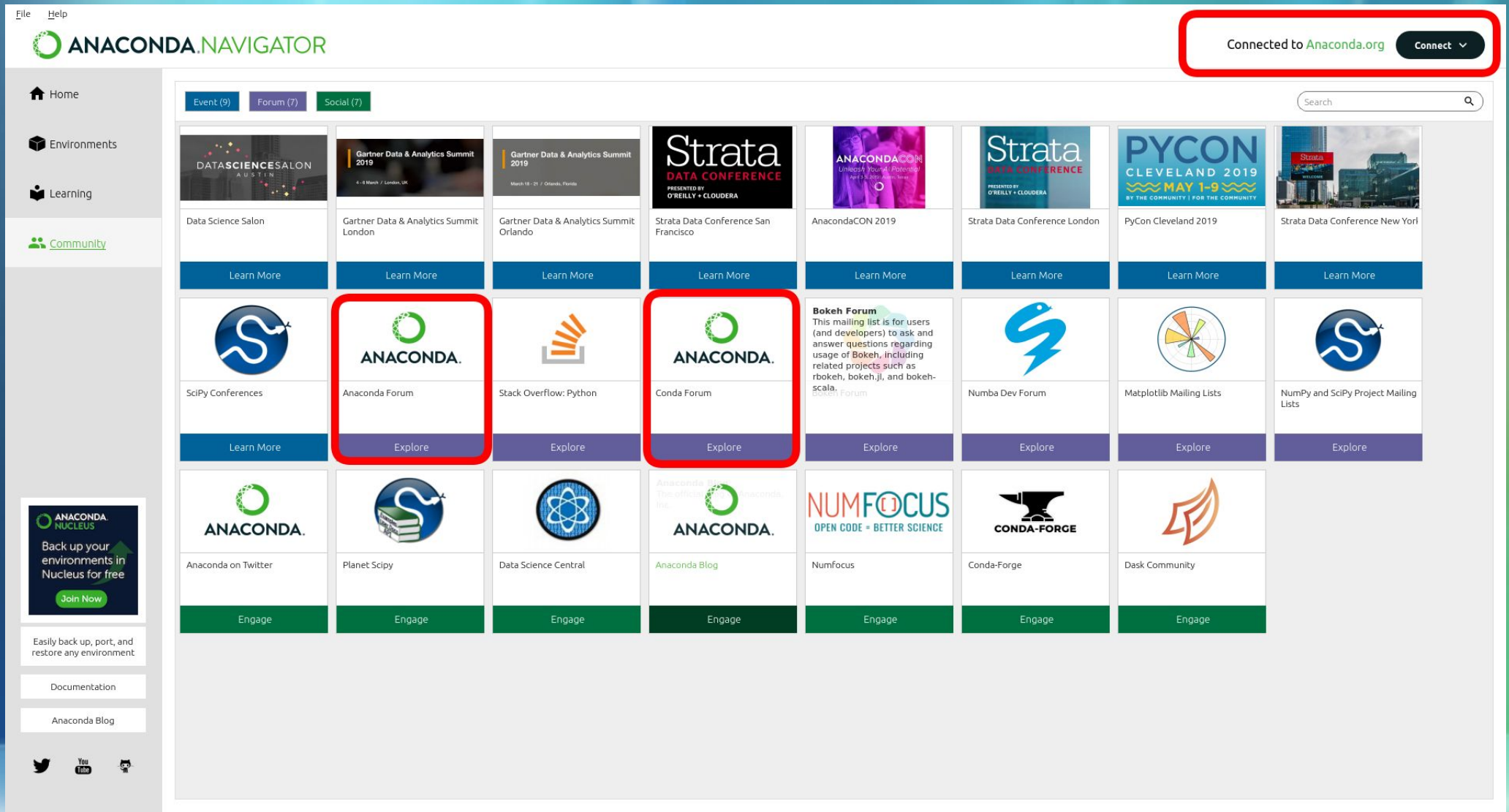
The ‘Anaconda Navigator’ - home page



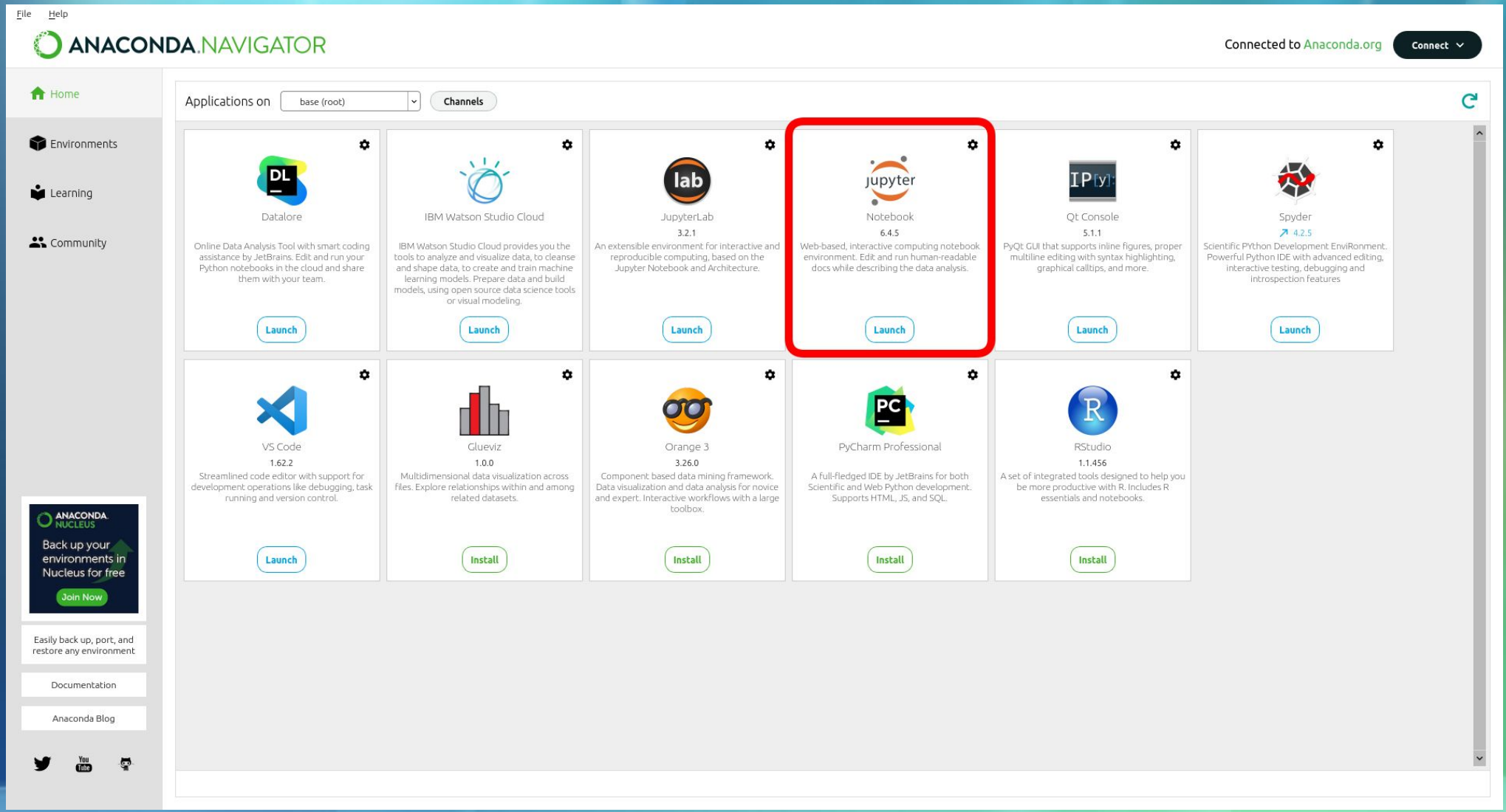
The ‘Anaconda Navigator’ - Learning



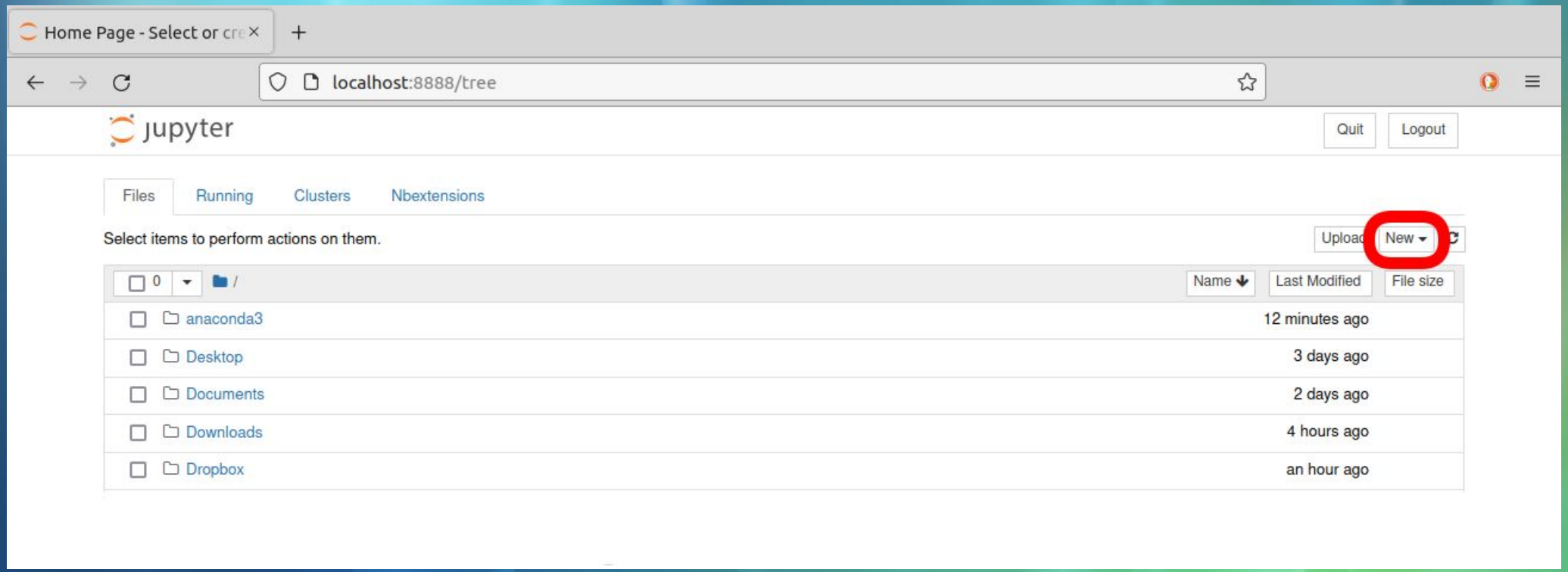
The ‘Anaconda Navigator’ - Community



To Start Jupyter Notebook - home page



Starting Jupyter Notebooks



Watch the Fireworks Fly!