

# Getting Started with Python

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KnoxPy meetup on September 10, 2020

Slides available at <https://gavinw.me>



# Download and install Python 3

The screenshot shows the Python.org homepage. At the top, there's a navigation bar with links for Python, PSF, Docs, PyPI, Jobs, and Community. Below the navigation is a search bar with a magnifying glass icon and a 'GO' button. To the right of the search bar are 'Socialize' and 'Donate' buttons.

The main content area features a large Python logo and the word "python™". Below the logo is a navigation menu with links for About, Downloads, Documentation, Community, Success Stories, News, and Events. A prominent feature is a code snippet in a dark box:

```
+ Python 3: Fibonacci series up to n
>>> def fib(n):
>>>     a, b = 0, 1
>>>     while a < n:
>>>         print(a, end=' ')
>>>         a, b = b, a+b
>>>     print()
>>> fib(1000)
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610
987
```

To the right of the code snippet is a section titled "Functions Defined" with the following text:

The core of extensible programming is defining functions. Python allows mandatory and optional arguments, keyword arguments, and even arbitrary argument lists. [More about defining functions in Python 3](#)

Below the code snippet, there are five numbered buttons (1, 2, 3, 4, 5). The background of the main content area has a blue gradient at the bottom.

At the bottom of the page, there's a promotional message: "Python is a programming language that lets you work quickly and integrate systems more effectively. [» Learn More](#)".

The footer contains several sections:

- Get Started**: Whether you're new to programming or an experienced developer, it's easy to learn and use Python. [Start with our Beginner's Guide](#).
- Download**: Python source code and installers are available for download for all versions! [Latest: Python 3.8.5](#).
- Docs**: Documentation for Python's standard library, along with tutorials and guides, are available online. [docs.python.org](#).
- Jobs**: Looking for work or have a Python related position that you're trying to hire for? Our [relaunched community-run job board](#) is the place to go. [jobs.python.org](#).

On the left side of the footer, there's a "Latest News" section with three items:

- 2020-09-05 [Python 3.5.10 is now available](#)
- 2020-09-02 [Python Software Foundation End-of-the-Year Fundraiser](#)
- 2020-08-22 [Python 3.5.10rc1 is now available](#)

On the right side of the footer, there's an "Upcoming Events" section with four items:

- 2020-09-11 [PyCon SK 2020 \[cancelled\]](#)
- 2020-09-18 [DjangoCon Europe 2020](#)
- 2020-09-19 [PyCon APAC 2020](#)

# Python tutorial

The screenshot shows the Python.org homepage with the 'Documentation' menu item highlighted in yellow. A red curved arrow points from the 'Tutorial' link on the right side of the page towards the 'Docs' section in the top navigation bar.

**Python's standard documentation: download, browse or watch a tutorial.**

Get started below, or visit the [Documentation page to browse by version](#).

[Python Docs](#)

**Documentation**

- Docs
- Audio/Visual Talks
- Beginner's Guide
- Developer's Guide
- FAQ
- Non-English Docs
- PEP Index
- Python Books
- Python Essays

**Python 3.8.6rc1 documentation**

Welcome! This is the documentation for Python 3.8.6rc1.

**Parts of the documentation:**

- [What's new in Python 3.8?](#) or all "What's new" documents since 2.0
- [Tutorial start here](#)
- [Library Reference keep this under your pillow](#)
- [Language Reference describes syntax and language elements](#)
- [Python Setup and Usage how to use Python on different platforms](#)
- [Python HOWTOs in-depth documents on specific topics](#)
- [Indices and tables](#)

**Installing Python Modules**  
installing from the Python Package Index & other sources

**Distributing Python Modules**  
publishing modules for installation by others

**Extending and Embedding**  
tutorial for C/C++ programmers

**Python/C API**  
reference for C/C++ programmers

**FAQs**  
frequently asked questions (with answers!)

# Anaconda - Python for scientists

The screenshot shows the official website for Anaconda at [www.anaconda.com](http://www.anaconda.com). The page features a navigation bar with links for Products, Pricing, Solutions, Resources, Blog, Company, and a prominent 'Get Started' button. The main headline reads 'Data science technology for human sensemaking.' Below this, a subtext states: 'A movement that brings together millions of data science practitioners, data-driven enterprises, and the open source community.' A large cluster of diverse, circular profile pictures of people is centered on the page, symbolizing the community. At the bottom, there are logos for various companies: alibaba, PNC, ExxonMobil, Goldman, and citi.

ANACONDA. Products ▾ Pricing Solutions ▾ Resources ▾ Blog Company ▾ Get Started

## Data science technology for human sensemaking.

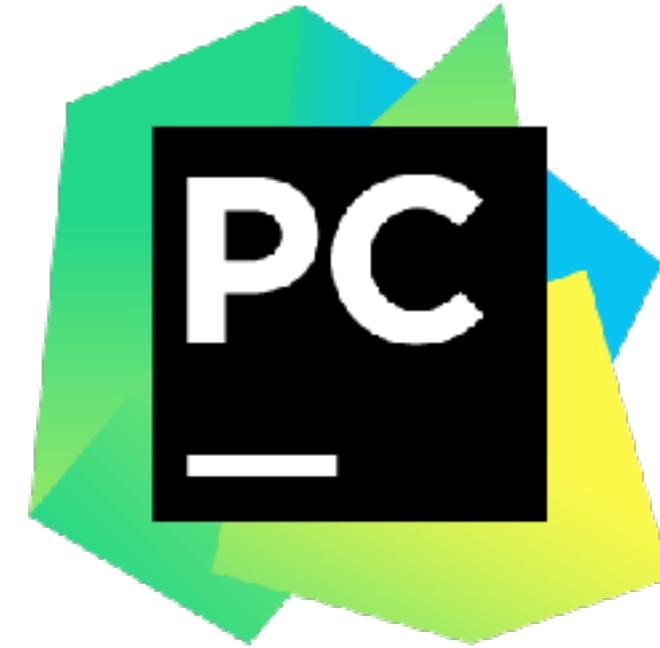
A movement that brings together millions of data science practitioners, data-driven enterprises, and the open source community.

Get Started

alibaba PNC ExxonMobil Goldman citi

# IDEs and Text Editors

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**PyCharm**

<https://www.jetbrains.com/pycharm/>



**Sublime Text**

<https://www.sublimetext.com>



**Spyder IDE**

<https://github.com/spyder-ide/spyder>

**IP[y]:**  
**IPython**

**iPython**

<https://ipython.org>



**Jupyter Notebook**

<http://jupyter.org>



**Visual Studio Code**

<https://code.visualstudio.com>

# Python Package Index (PyPI)

The screenshot shows the PyPI homepage with a blue header bar. The header includes a logo of three stacked cubes in blue, yellow, and white, followed by the text "pypi.org". On the right side of the header are links for "Help", "Donate", "Log in", and "Register". Below the header, a large white banner features the text "Find, install and publish Python packages with the Python Package Index". A search bar with the placeholder "Search projects" and a magnifying glass icon is positioned below the banner. Underneath the search bar, there is a link "Or [browse projects](#)". At the bottom of the page, there is a summary of statistics: "194,619 projects", "1,450,470 releases", "2,129,503 files", and "366,564 users". The footer contains the Python Package Index logo and a brief description of what PyPI is and how it helps the community.

**Find, install and publish Python packages with the Python Package Index**

Search projects 

Or [browse projects](#)

194,619 projects 1,450,470 releases 2,129,503 files 366,564 users

**python**™  
Package Index

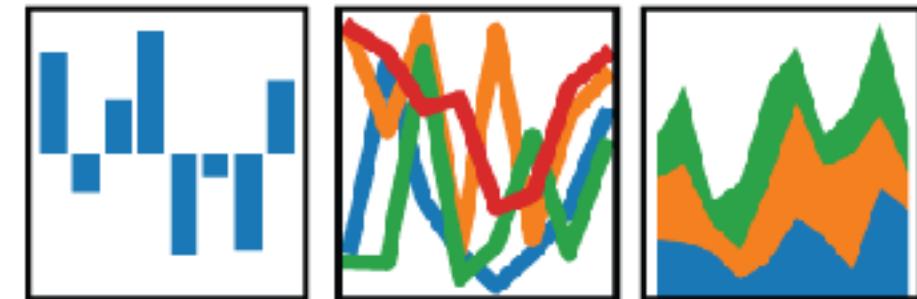
The Python Package Index (PyPI) is a repository of software for the Python programming language. PyPI helps you find and install software developed and shared by the Python community. [Learn about installing packages ↗](#). Package authors use PyPI to distribute their software. [Learn how to package your Python code for PyPI ↗](#).

# Scientific and visualization packages

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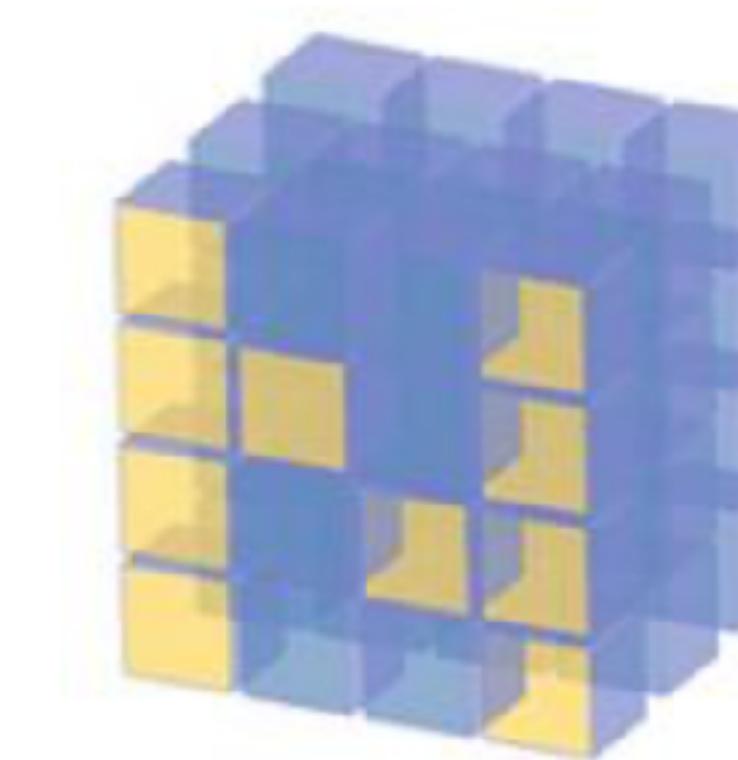
## pandas

$$y_{it} = \beta' x_{it} + \mu_i + \epsilon_{it}$$



### Pandas

<http://pandas.pydata.org>



## NumPy

<http://www.numpy.org>



## SciPy

<https://www.scipy.org>



## Bokeh

<https://bokeh.pydata.org>

## matplotlib

### Matplotlib

<http://matplotlib.org>



## plotly

### Plotly

<https://plotly.com/python/>

# Web and database packages

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Flask

Flask

<http://flask.pocoo.org>



Django

<https://www.djangoproject.com>



Requests

<http://docs.python-requests.org>



Bottle

<https://bottlepy.org>



h5py

<https://www.h5py.org>



SQLAlchemy

<https://www.sqlalchemy.org>

# Other packages

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**MicroPython**  
<https://micropython.org>



**CircuitPython**  
<https://github.com/adafruit/circuitpython>



**Pillow**  
<https://python-pillow.org>

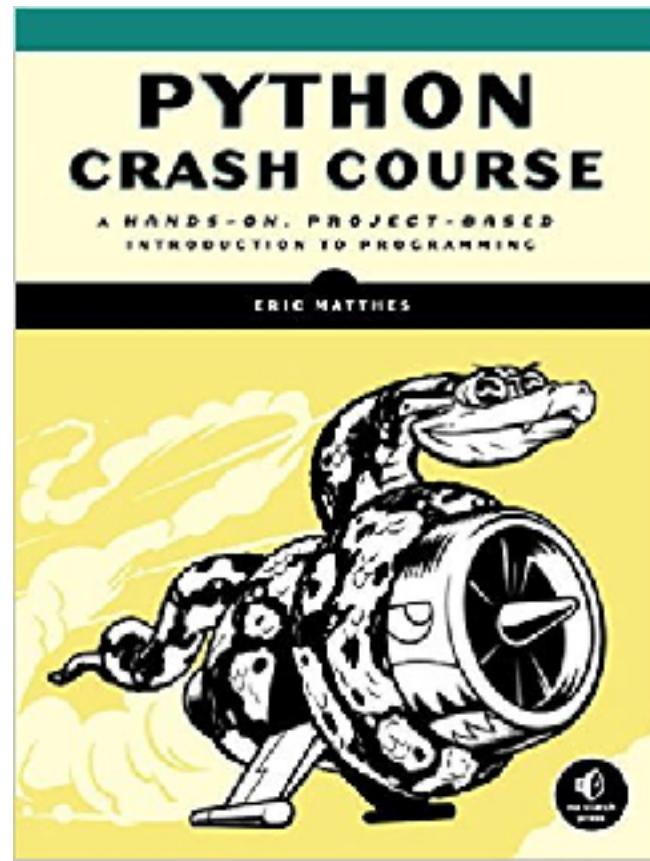


**scikit-learn**  
<https://scikit-learn.org>

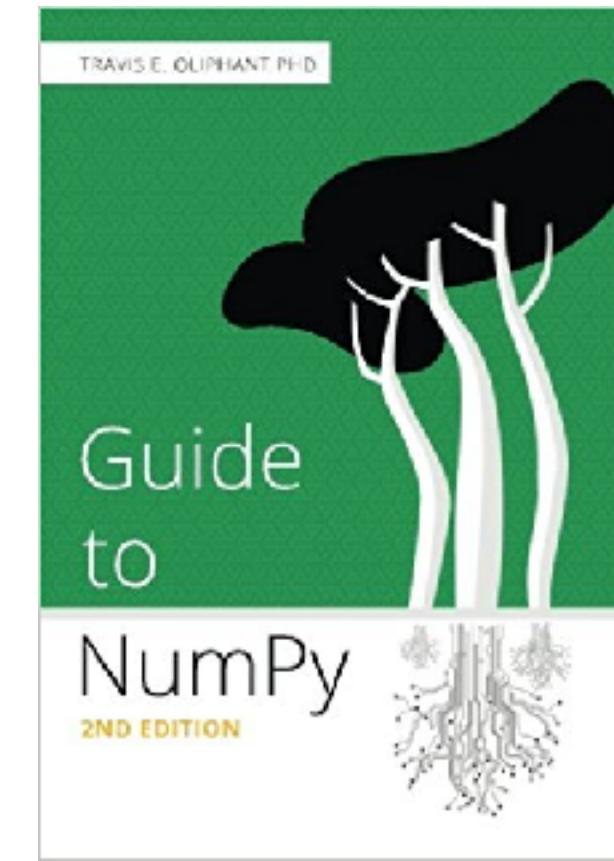


**SymPy**  
<http://www.sympy.org>

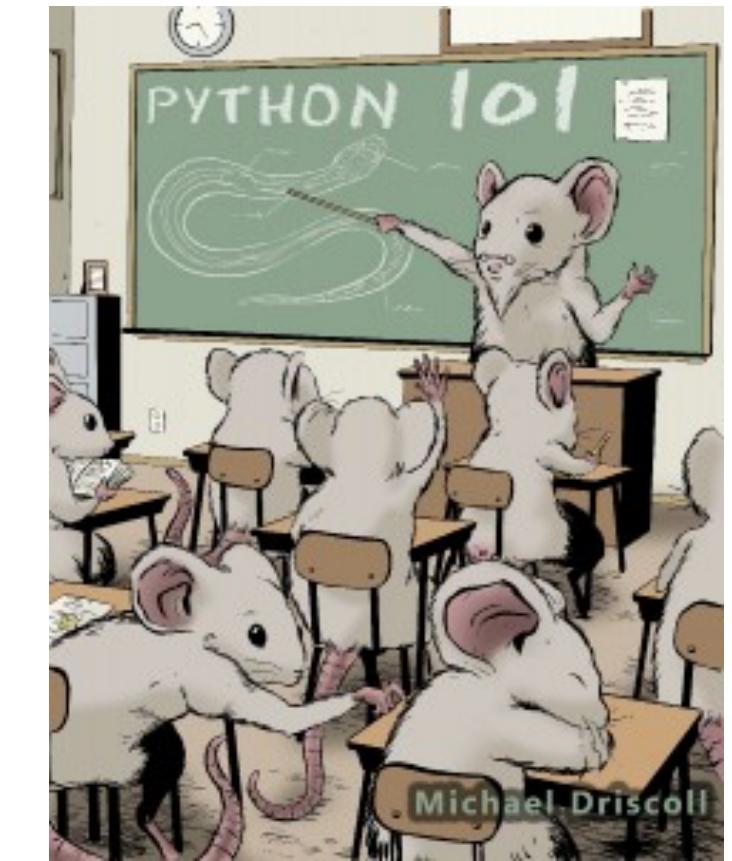
# Books



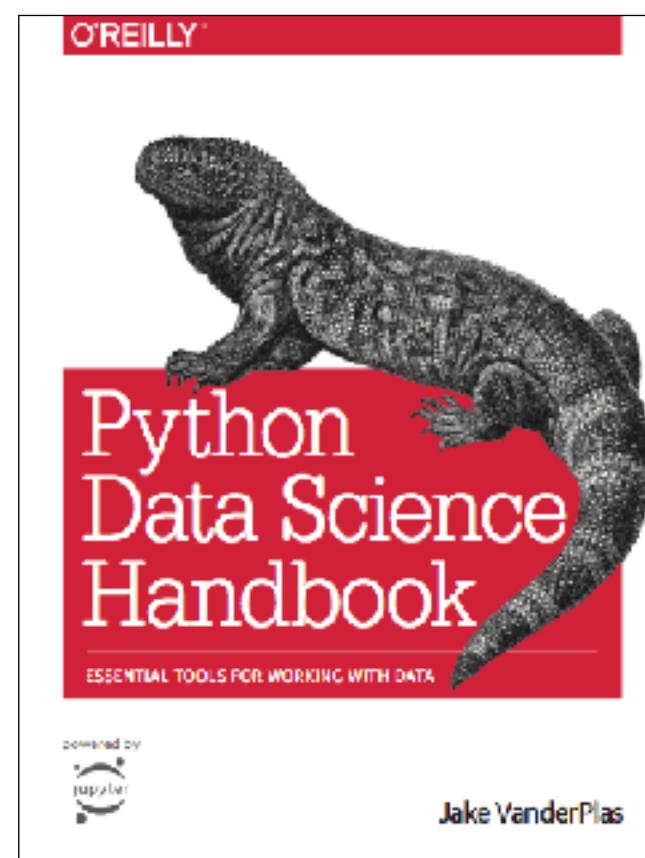
**Python Crash Course**  
by Eric Matthes



**Guide to NumPy**  
by Travis Oiphant

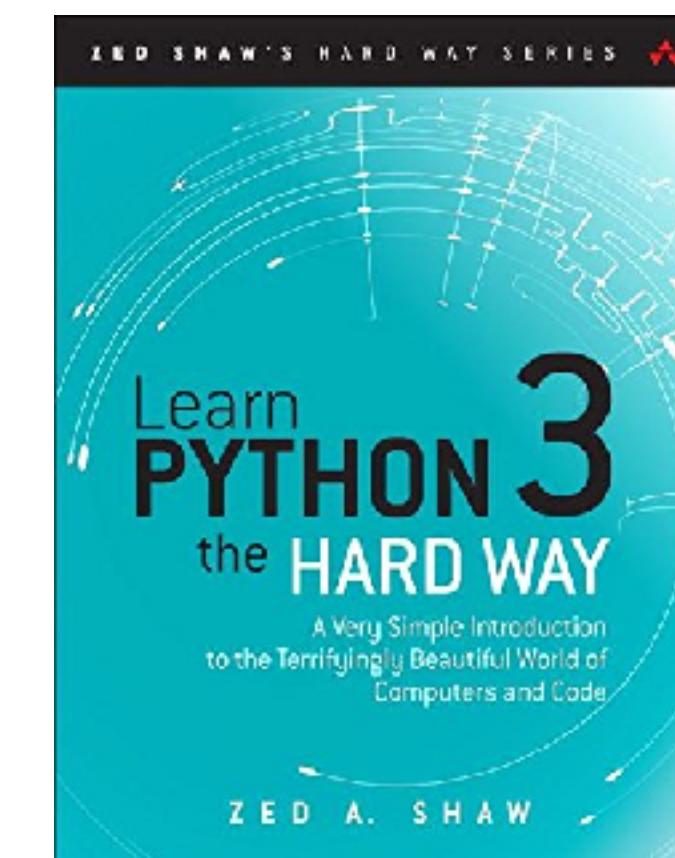


**Python 101**  
by Michael Driscoll

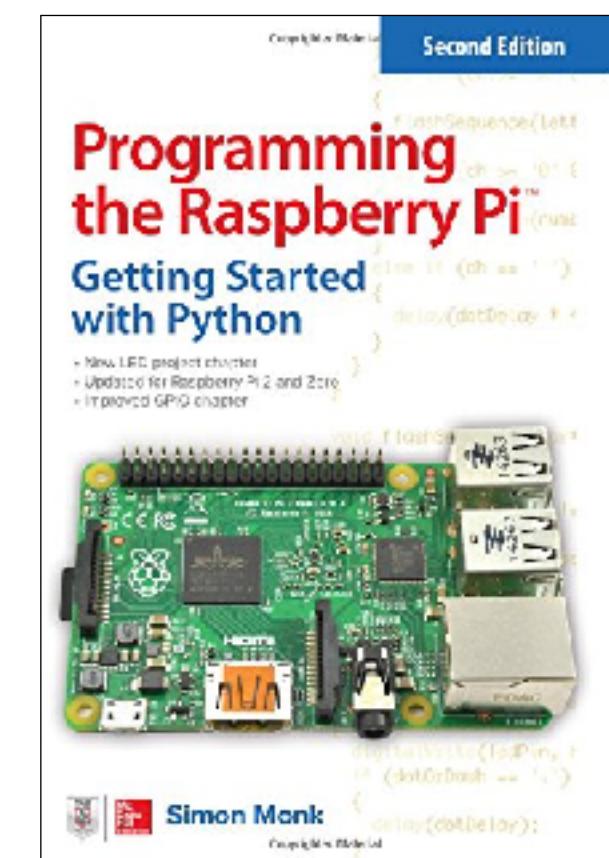


**Python Data Science Handbook**  
by Jake VanderPlas

<https://jakevdp.github.io/PythonDataScienceHandbook/>



**Learn Python 3 the Hard Way**  
by Zed Shaw



**Programming the Raspberry Pi**  
by Simon Monk

# Online Courses and Tutorials

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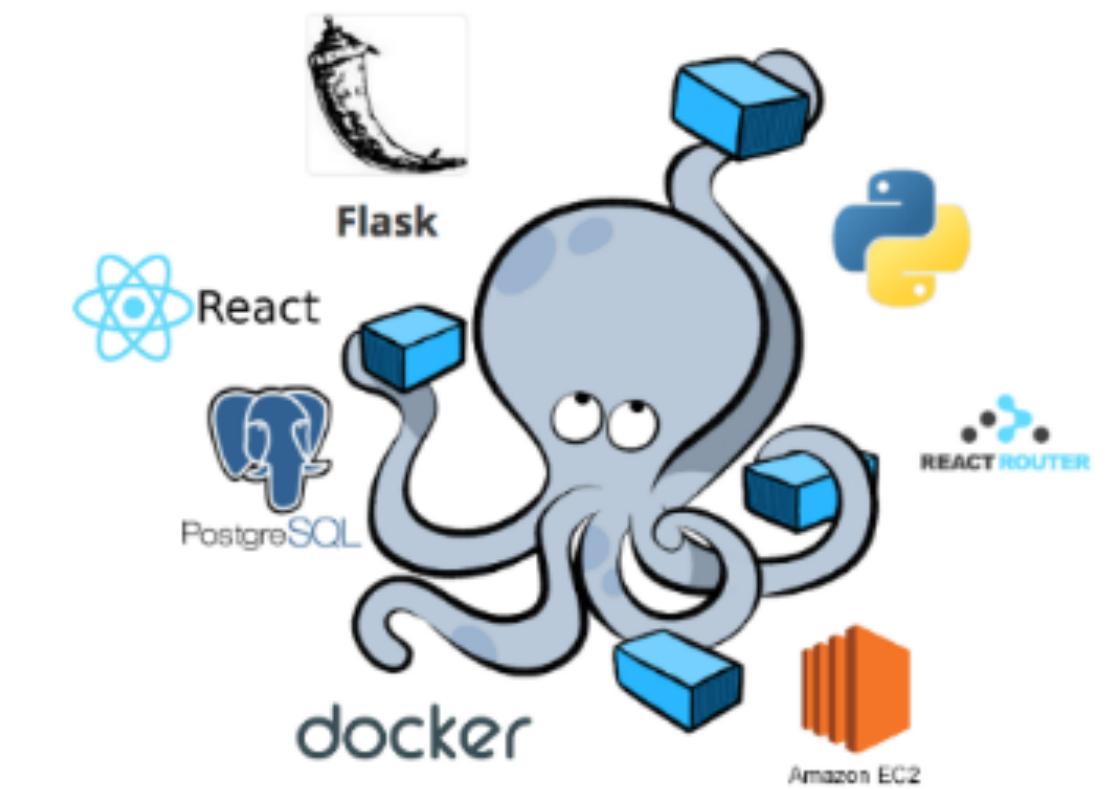
**DataCamp**

<https://www.datacamp.com>



**Snakify**

<https://snakify.org>



**Test Driven Development**

<http://testdriven.io>



**LearnPython**

<https://www.learnpython.org>



**Coursera**

<https://www.coursera.org>



**Udacity**

<https://www.udacity.com>

# Conferences



## SciPy2017

**SciPy**

scientific computing conference

<https://conference.scipy.org>



**PyCon**

largest gathering for open-source python

<https://us.pycon.org>



**PyTennessee**

regional conference in Nashville

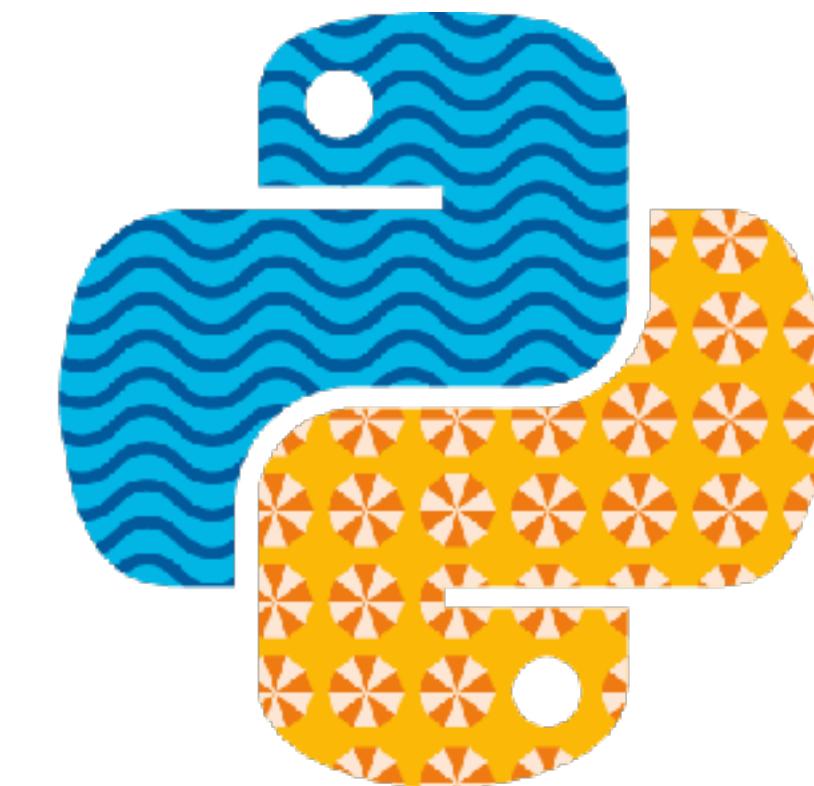
<https://www.pytennessee.org>



**AnacondaCon**

open data science conference

<https://anacondacon18.io>



**EuroPython**

largest European python conference

<https://ep2017.europython.eu/en/>



**PyOhio**

free annual python conference

<https://pyohio.org>

# More Resources

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The image shows a Mac OS X desktop with a web browser window open. There are two tabs visible in the browser:

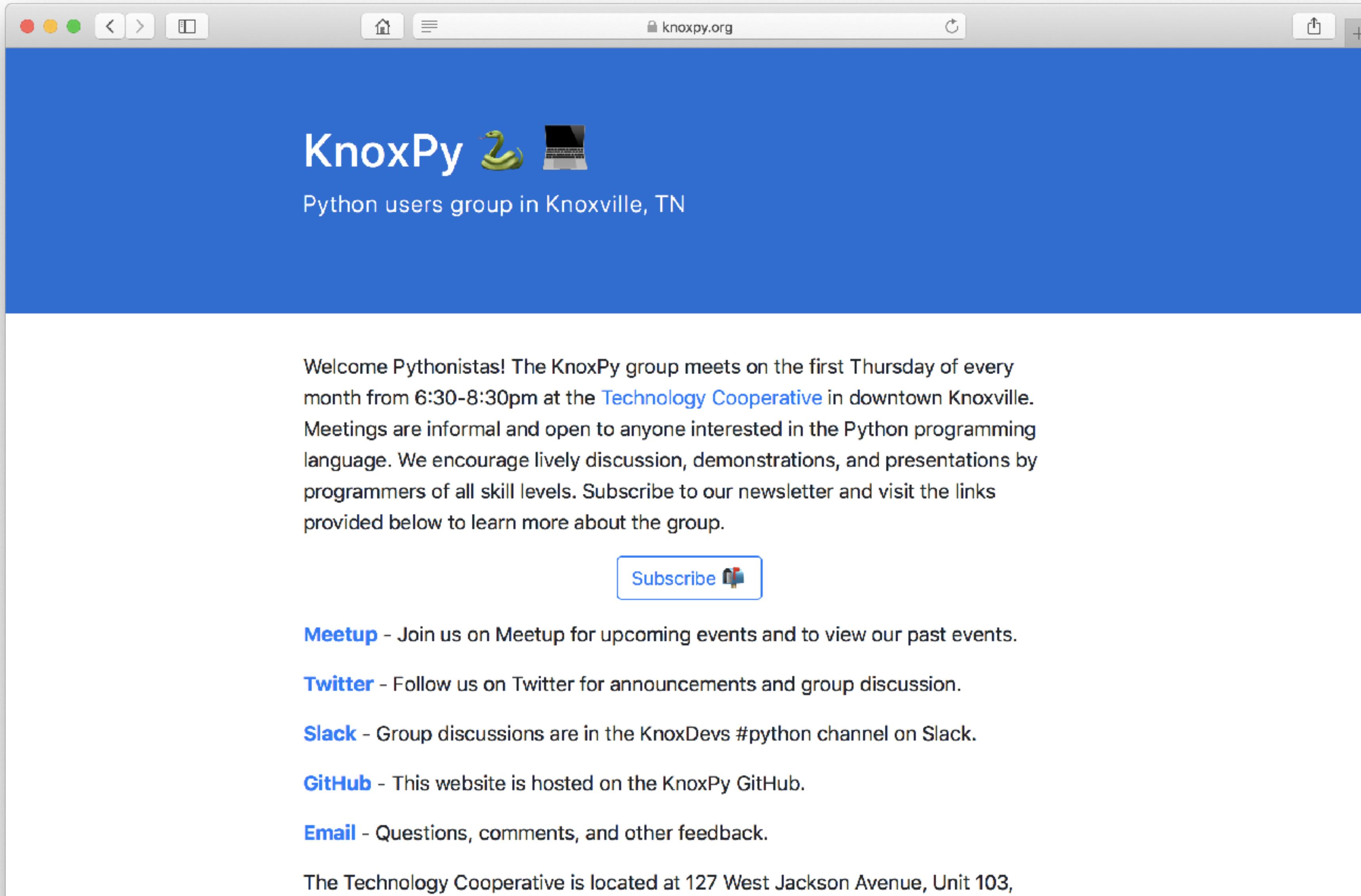
- Top Tab:** Shows the homepage of the KnoxPy website ([knoxpy.org](http://knoxpy.org)). The page features a blue header with the text "KnoxPy" and icons of a snake and a laptop. Below the header, it says "Python users group in Knoxville, TN". The main content area contains a welcome message, information about meetings, and links to social media platforms like Meetup, Twitter, Slack, GitHub, and Email. It also includes a map of Knoxville and a brief description of the Technology Cooperative.
- Bottom Tab:** Shows a "Resources" page from the same website ([knoxpy.org/resources](http://knoxpy.org/resources)). This page lists various Python-related resources categorized by type. The categories and their corresponding links are:
  - Books:** Effective Computation in Physics, Elegant SciPy, Flask Web Development, The Hitchhiker's Guide to Python, Python for Data Science Handbook, Two Scoops of Django
  - IDEs:** PyCharm, Spyder, Sublime Text, Visual Studio Code
  - Podcasts:** Python Bytes, Talk Python to Me
  - Visualization Tools:** Bokeh, Matplotlib, Mayavi, Plotly
  - Other Python Sites:** Anaconda, Enthought Canopy, NumFOCUS, pyOpenSci, Python, Real Python

A red curved arrow points from the top tab to the bottom tab, indicating a transition or comparison between the two pages.

# Next steps...

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Attend more KnoxPy meetings! <https://knoxpy.org>

A screenshot of a web browser window displaying the KnoxPy website. The browser has a light gray header with standard OS X-style buttons. The address bar shows 'knoxpy.org'. The main content area has a blue header with the text 'KnoxPy' followed by a Python logo (a green snake) and a laptop icon. Below the header is the text 'Python users group in Knoxville, TN'. The main body of the page contains a welcome message about the group's meeting schedule and links to various communication platforms.

Welcome Pythonistas! The KnoxPy group meets on the first Thursday of every month from 6:30-8:30pm at the [Technology Cooperative](#) in downtown Knoxville. Meetings are informal and open to anyone interested in the Python programming language. We encourage lively discussion, demonstrations, and presentations by programmers of all skill levels. Subscribe to our newsletter and visit the links provided below to learn more about the group.

[Subscribe](#)

**Meetup** - Join us on Meetup for upcoming events and to view our past events.

**Twitter** - Follow us on Twitter for announcements and group discussion.

**Slack** - Group discussions are in the KnoxDevs #python channel on Slack.

**GitHub** - This website is hosted on the KnoxPy GitHub.

**Email** - Questions, comments, and other feedback.

The Technology Cooperative is located at 127 West Jackson Avenue, Unit 103,

# Questions?

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KnoxPy website <https://knoxpy.org>

Slides available at <https://gavinw.me>

