Intro to Python: Conclusion

Stdlib, PyPI, and where to go from here

Don't Reinvent the Wheel

You don't have to just reuse your own code.

You can also find and reuse code from:

- Python standard library (stdlib)
- Python Package Index (PyPI)

We'll go into these next.

Python Standard Library

Also called the **stdlib**, it:

- Comes pre-installed with Python.
- Has modules for math, path handling, etc.

StdLib Has Modules Like Random

random module:

- Has pseudo-random number generators.

You can import it as if it were any other .py file:

```
import random
```

Example: Using Random

Create a file called **odds.py** and open it in your text editor.

Type in the code on the next slide...

Example: Using Random

odds.py — learn_python

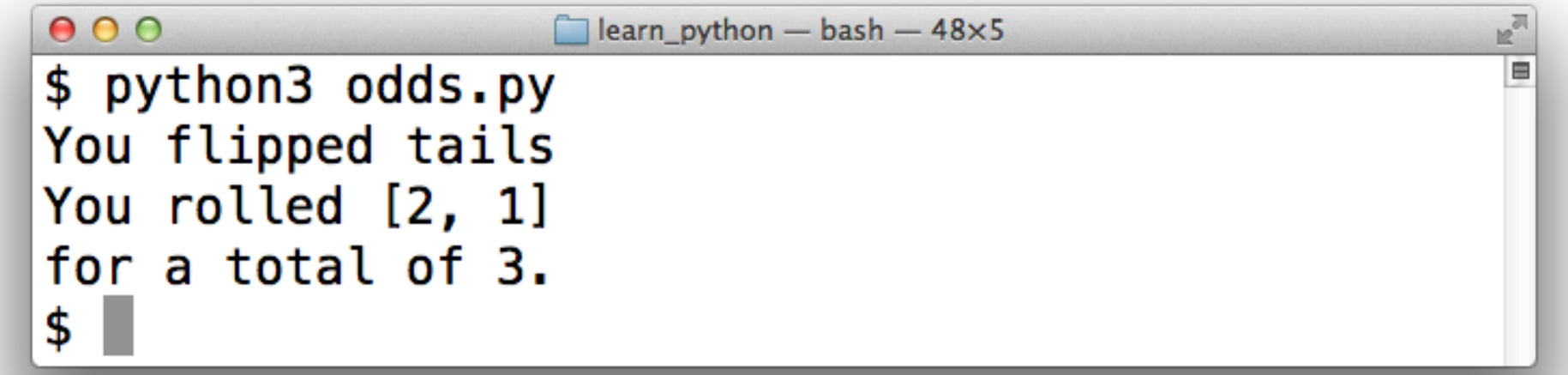
odds.py

```
1  import random
2
3  def flip_coin():
4      return random.choice(["heads", "tails"])
5
6  print("You flipped {}".format(flip_coin()))
7
8  def roll_dice():
9      die_1 = random.randint(1, 6)
10     die_2 = random.randint(1, 6)
11     return [die_1, die_2]
12
13 dice = roll_dice()
14 print("You rolled {}".format(dice))
15 print("for a total of {}.".format(sum(dice)))
```

Line: 6:44 | Python | Soft Tabs: 4 | flip_coin()

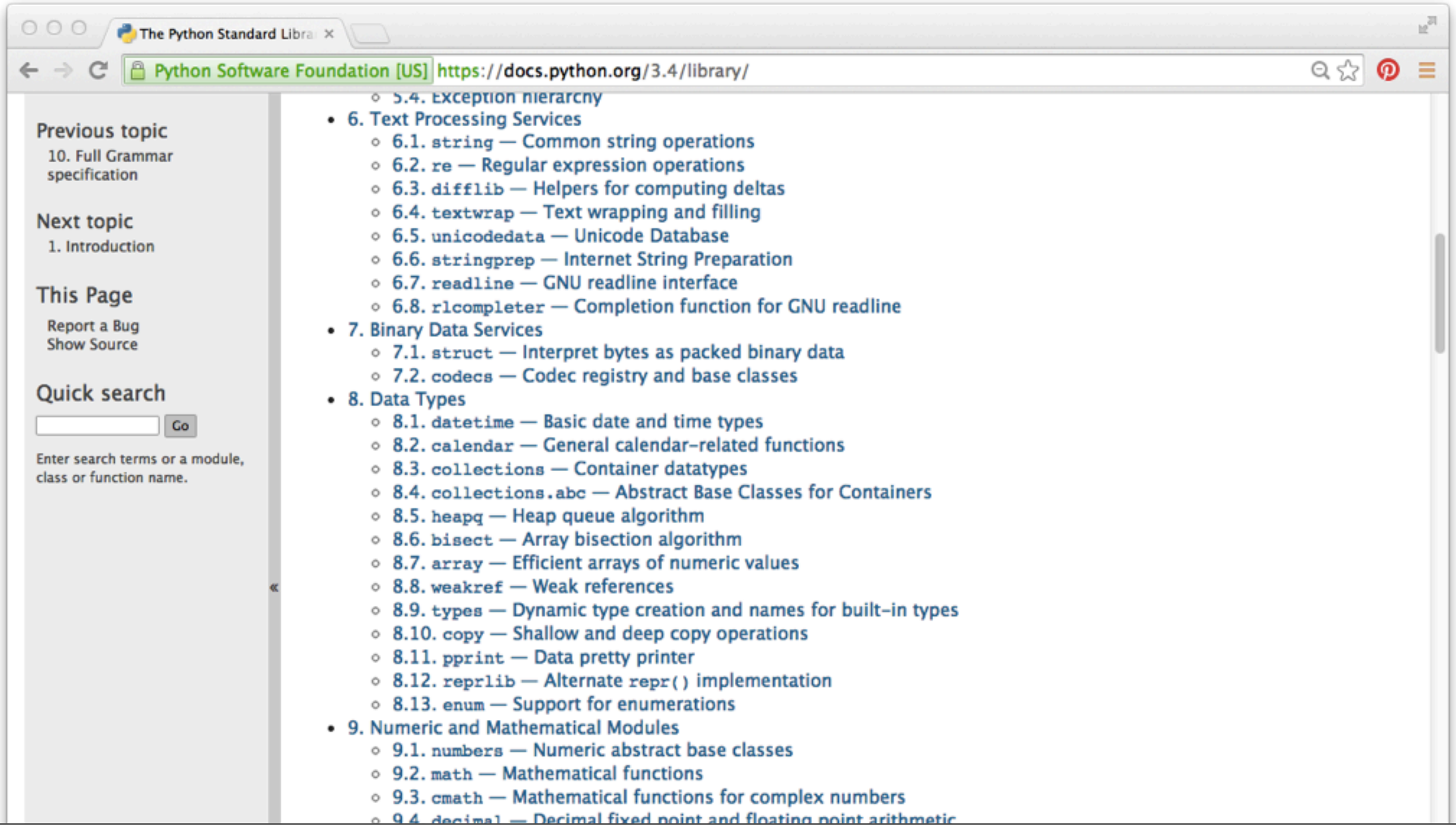
Example: Using Random

Run the program, as usual:



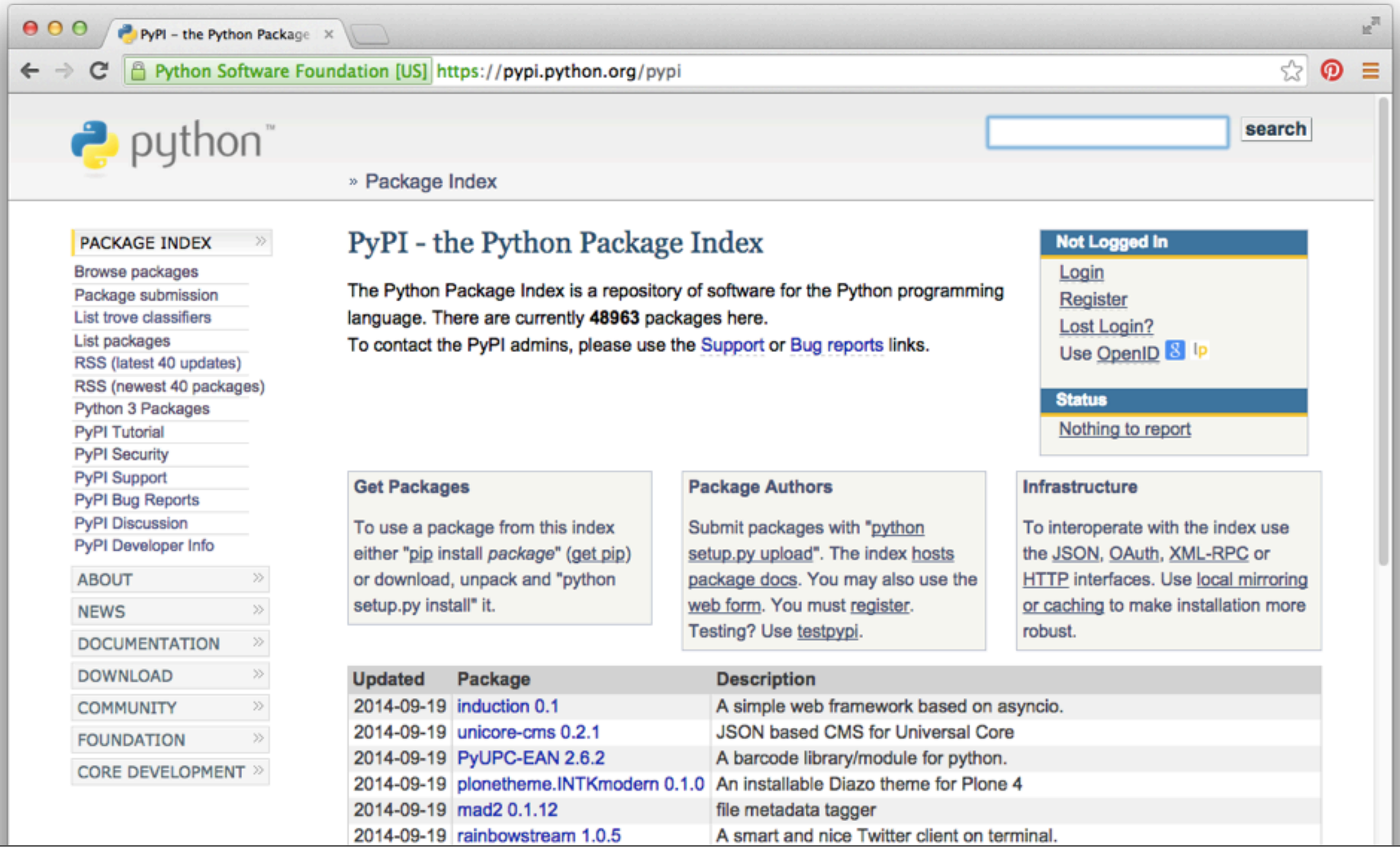
StdLib is Pre-Installed

Just import a module and use it! No installation necessary.



Python Package Index

Some packages in here are so much better than the stdlib.



Package vs. Module

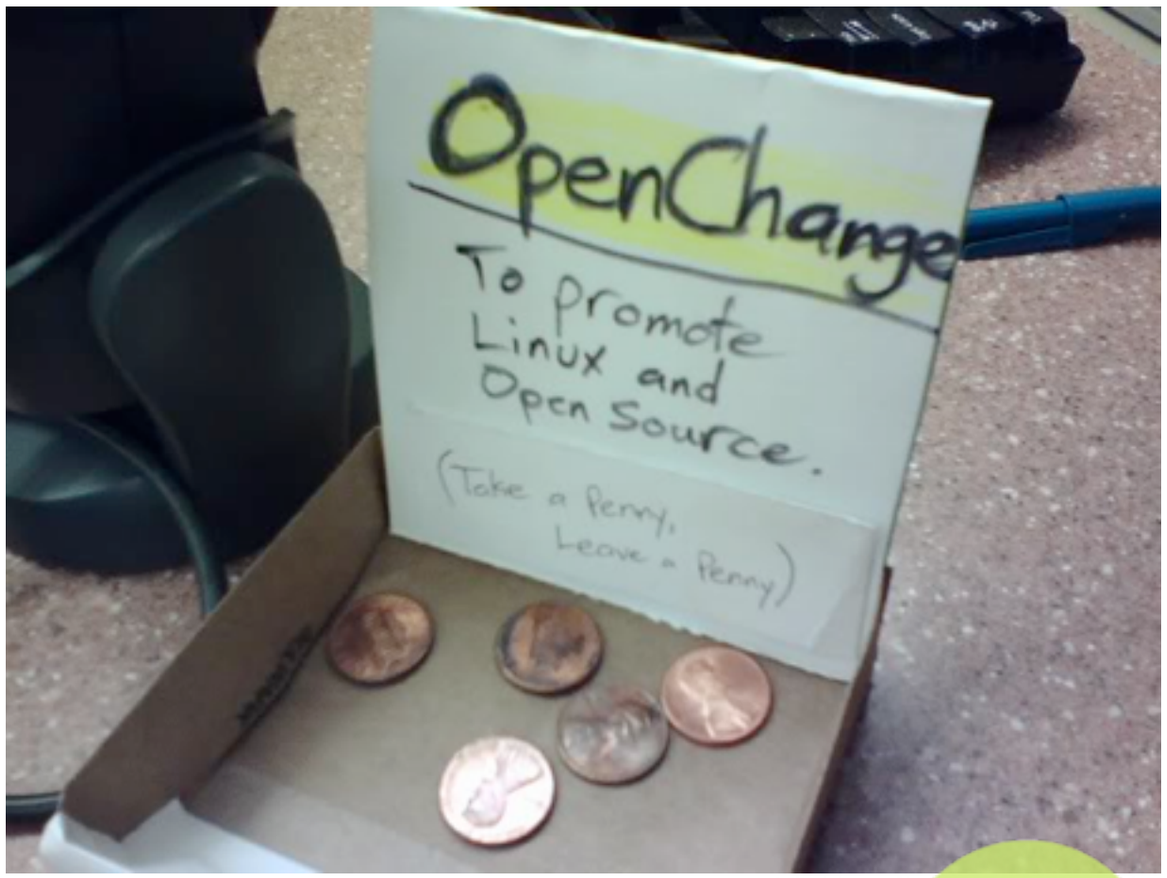
A package is a folder containing:

- Useful modules
- Sometimes other packaging cruft
  - e.g. files to help release your package on PyPI

FOSS

There's a lot of FOSS Python code available.

http://ubuntuforums.org/showthread.php?t=549713



Free and Open Source Software

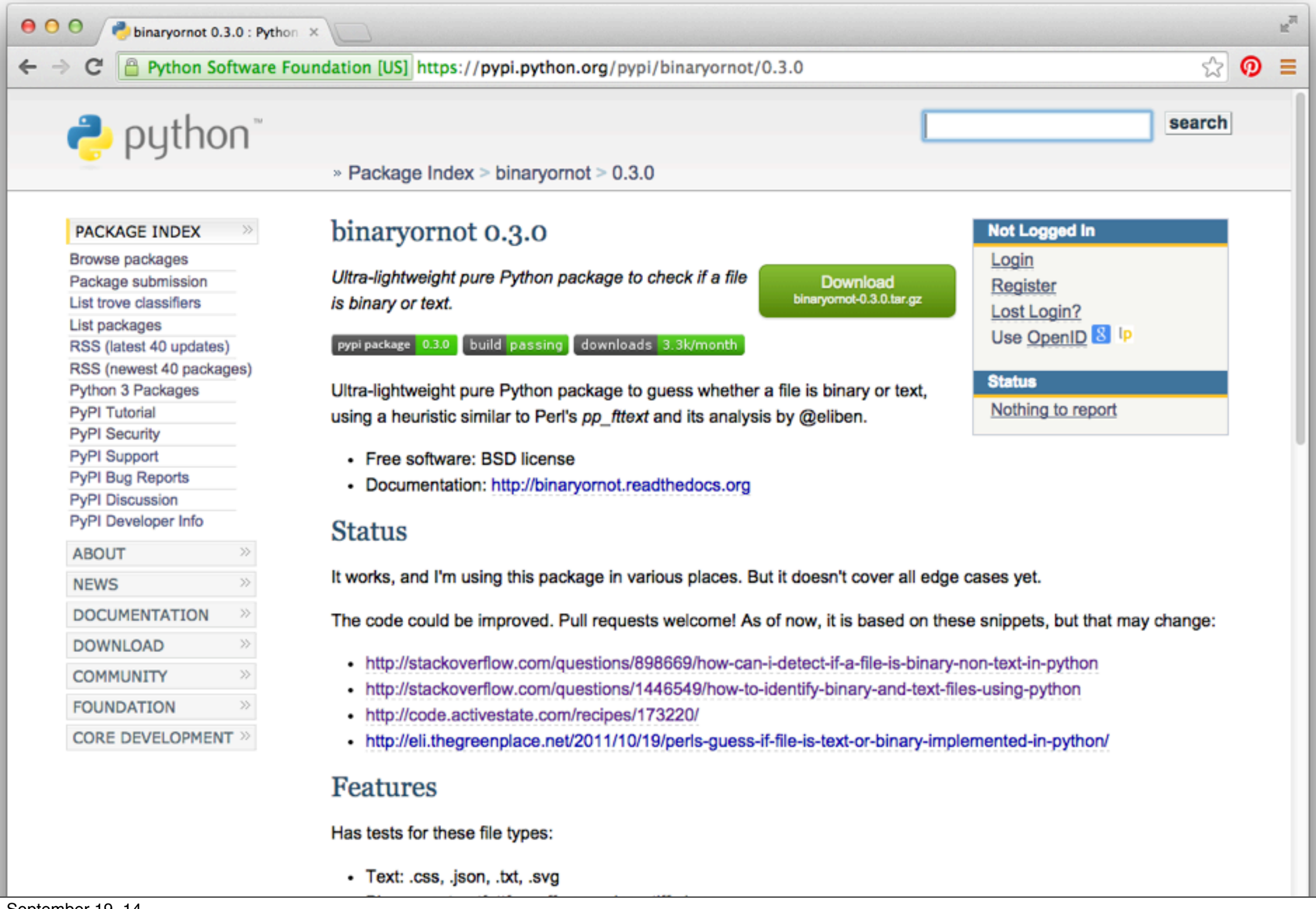
- Yay, free stuff!
- Treasure trove for projects
- Use it, give back too

http://en.wikipedia.org/wiki/Free_and_open-source_software

openhatch

code is fun

Package Example



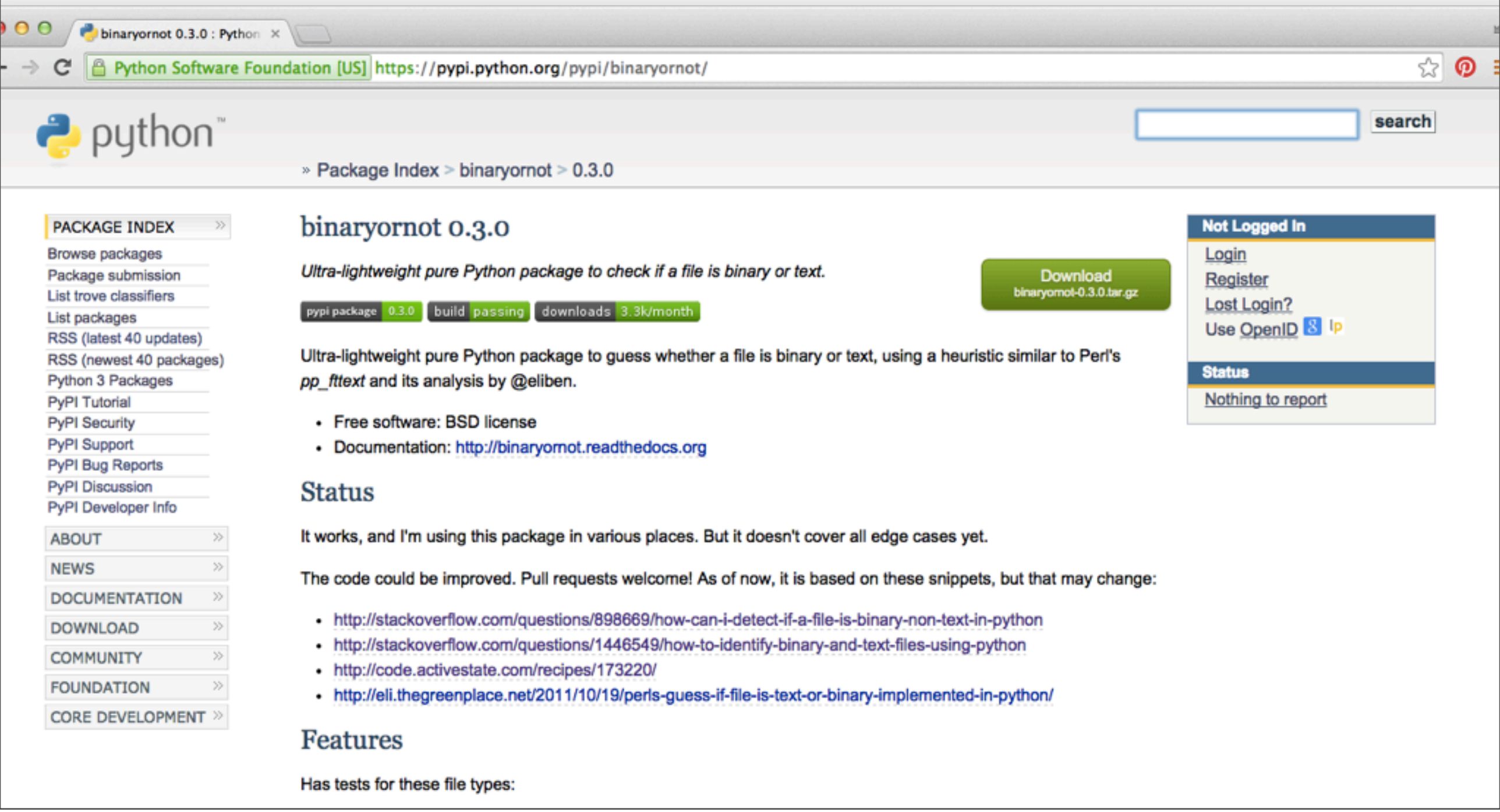
Exercise: Explore a Package

Go to https://pypi.python.org:

- Search for *binaryornot*
  - or "binary or not"

Exercise: Explore a Package

Study the package page:

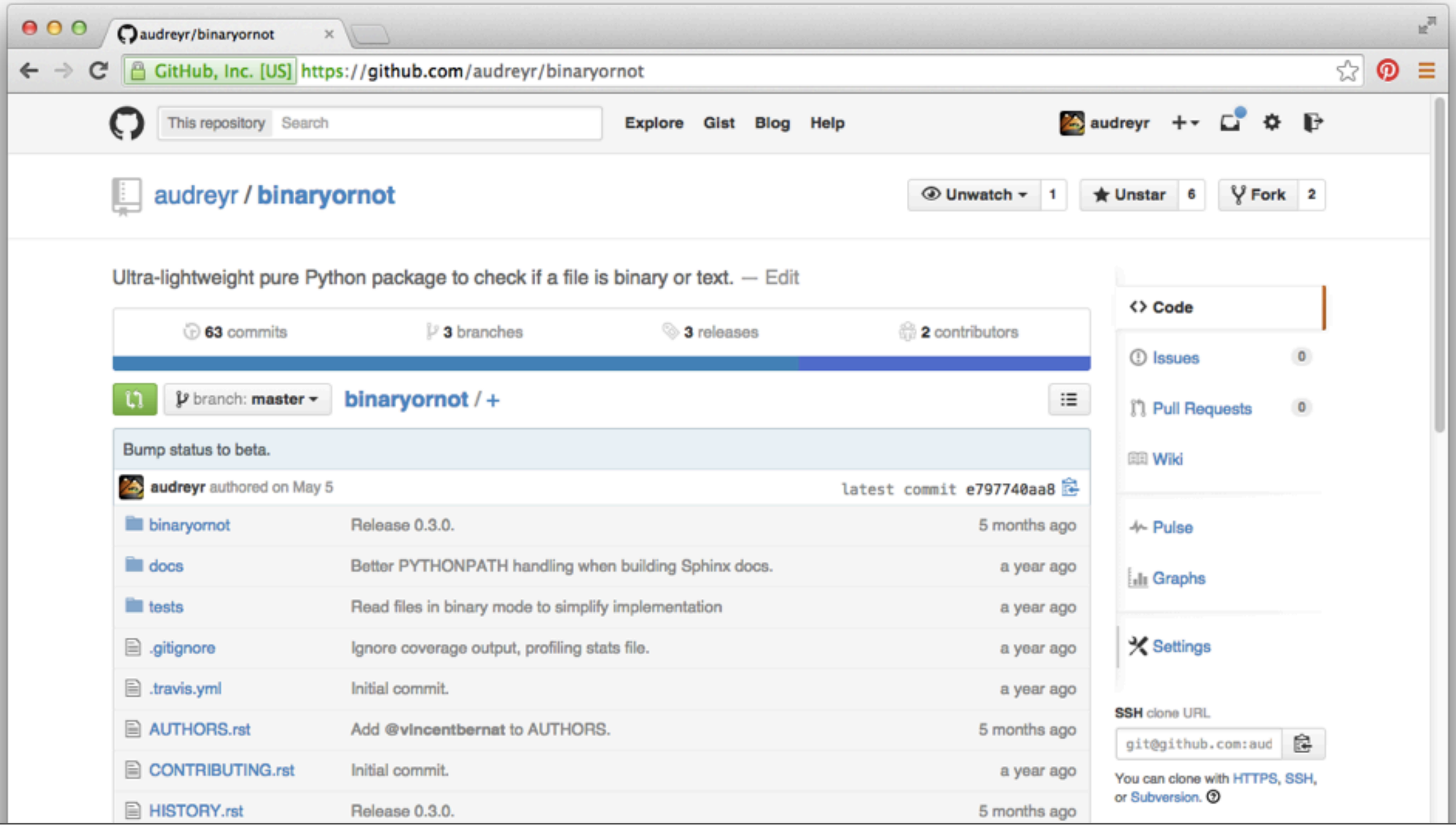


Exercise: Explore a Package

Scroll down and find the package's Home Page:

Exercise: Explore a Package

Now browse the code for the package:



Exercise: Explore a Package

The actual Python code is in the ***binaryornot/*** directory:

- ***check.py***
- ***helpers.py***

Look at those files. They're just modules containing simple Python functions.

Exercise: Explore a Package

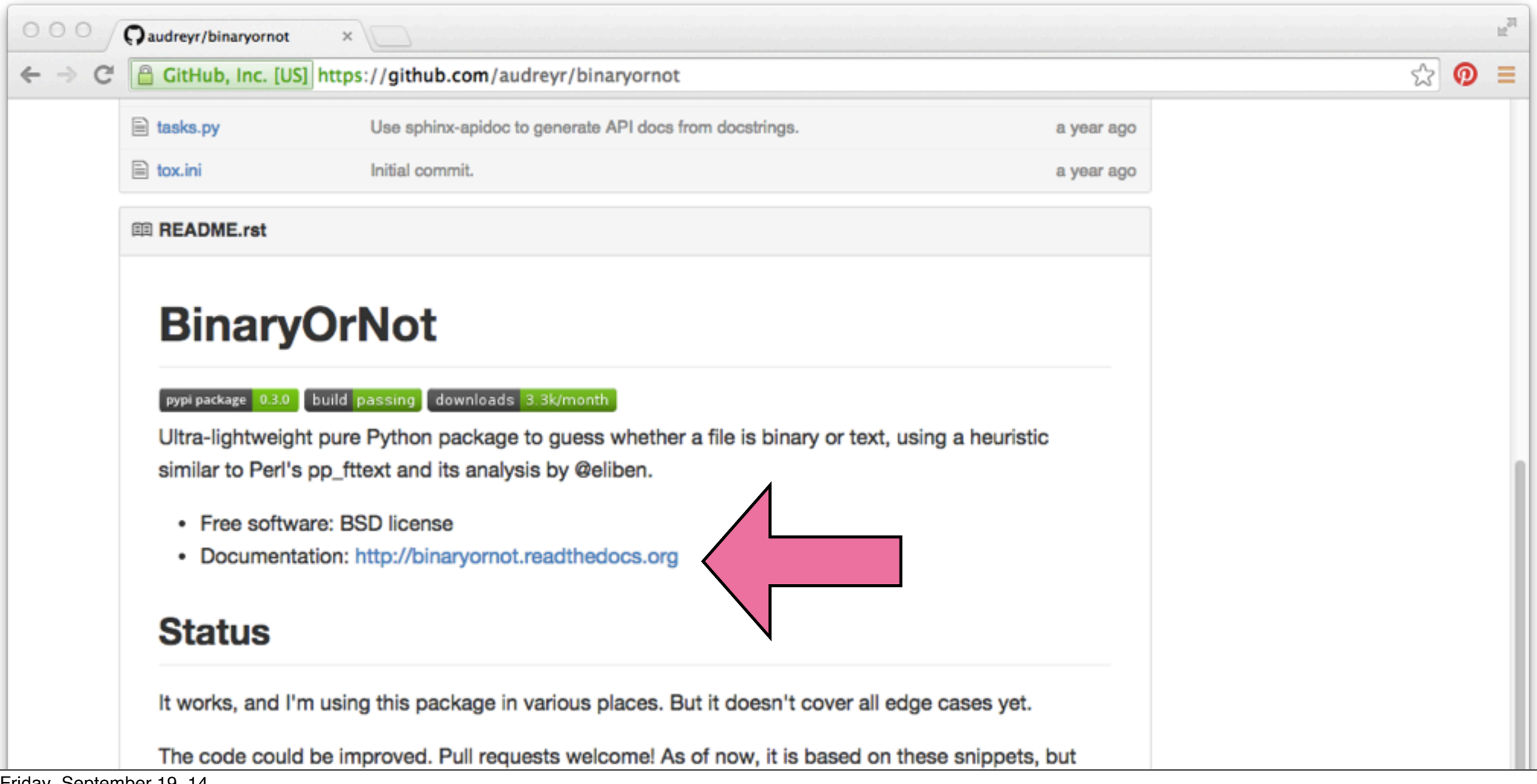
What about all the other files?

- __init__.py is needed for Python 2 compatibility
- .rst files, docs/ are for documentation
- setup.py, MANIFEST.in is packaging cruft
- tox, travis, tests/ are for testing

All this boilerplate can be auto-generated, don't worry

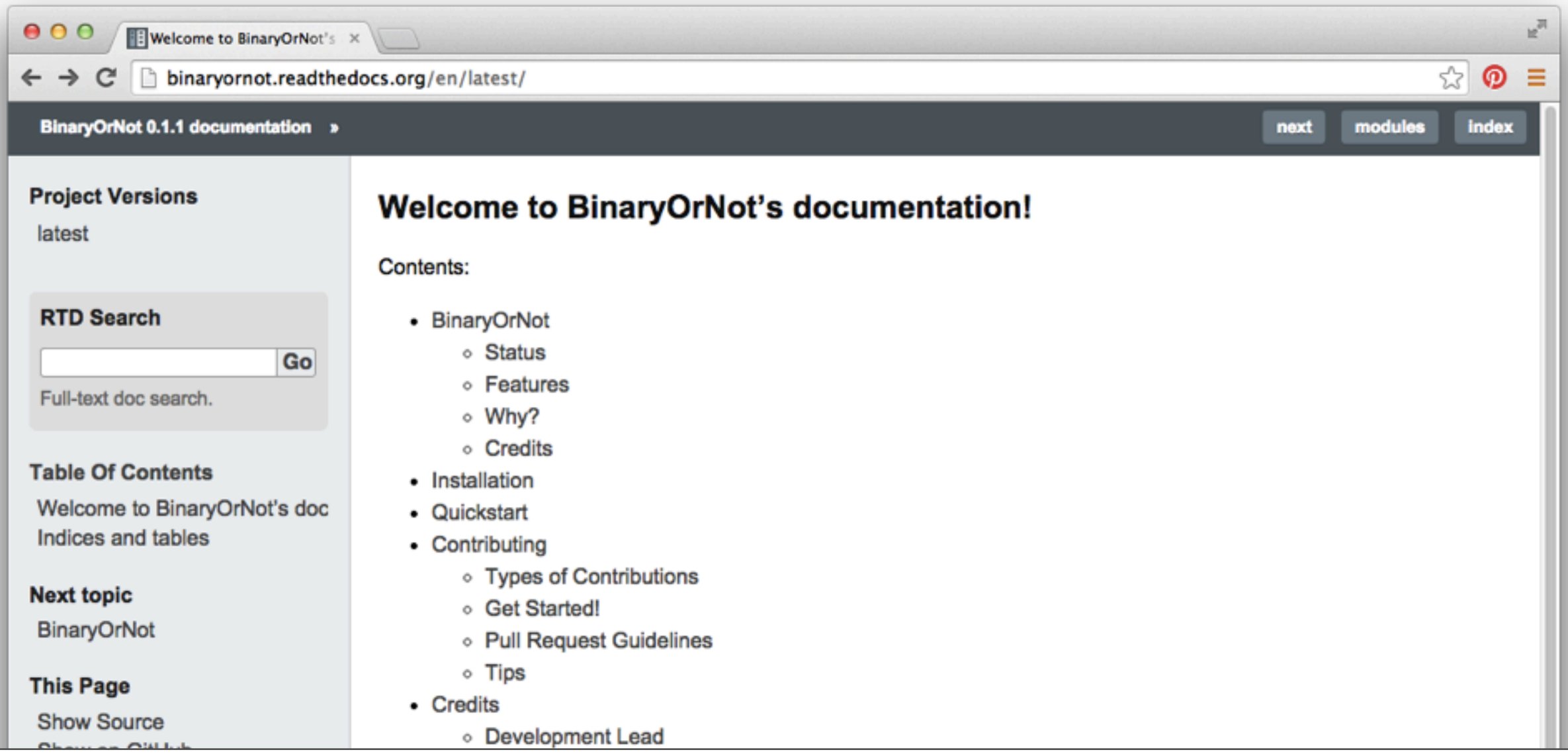
Exercise: Explore a Package

Find the link to the package's documentation:



Exercise: Explore a Package

The documentation for a package teaches you how to install and use it.



Installing Packages

Common package installation tools:

- pip
- anaconda ("conda")
- easy_install

Always read a package's docs for installation advice, though.

Creating new Packages

If you continue with Python coding, you'll want to create and release your own packages

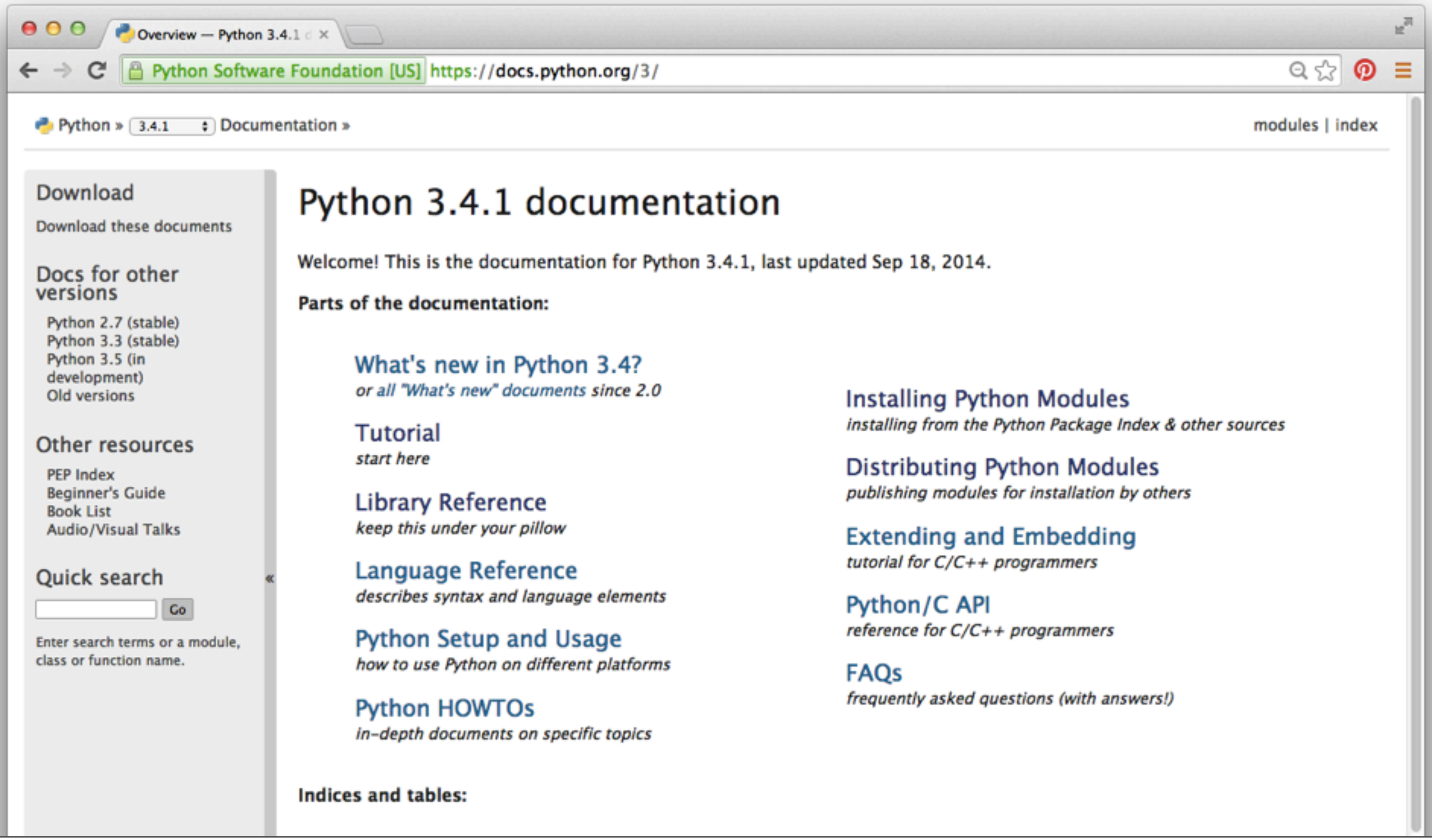
- Look up **cookiecutter**
  - Tool for generating the package boilerplate files

Where to go from here

Your next adventures in Python coding

Review on your Own! Study!

Start with the official Python docs & tutorial:



Free Online University Courses

Normally something like this would cost $$$, but we are lucky to get it for **free**:

coursera | Global Partners Courses Specializations Institutions About | Sign In Sign Up

RICE
Unconventional Wisdom

An Introduction to Interactive Programming in Python

Part of the "Fundamentals of Computing" Specialization »

This course is designed to be a fun introduction to the basics of programming in Python. Our main focus will be on building simple interactive games such as Pong, Blackjack and Asteroids.

Look! It just started! Sign up!

About the Course

This course is designed to help students with very little or no computing background learn the basics of building simple interactive applications. Our language of choice,

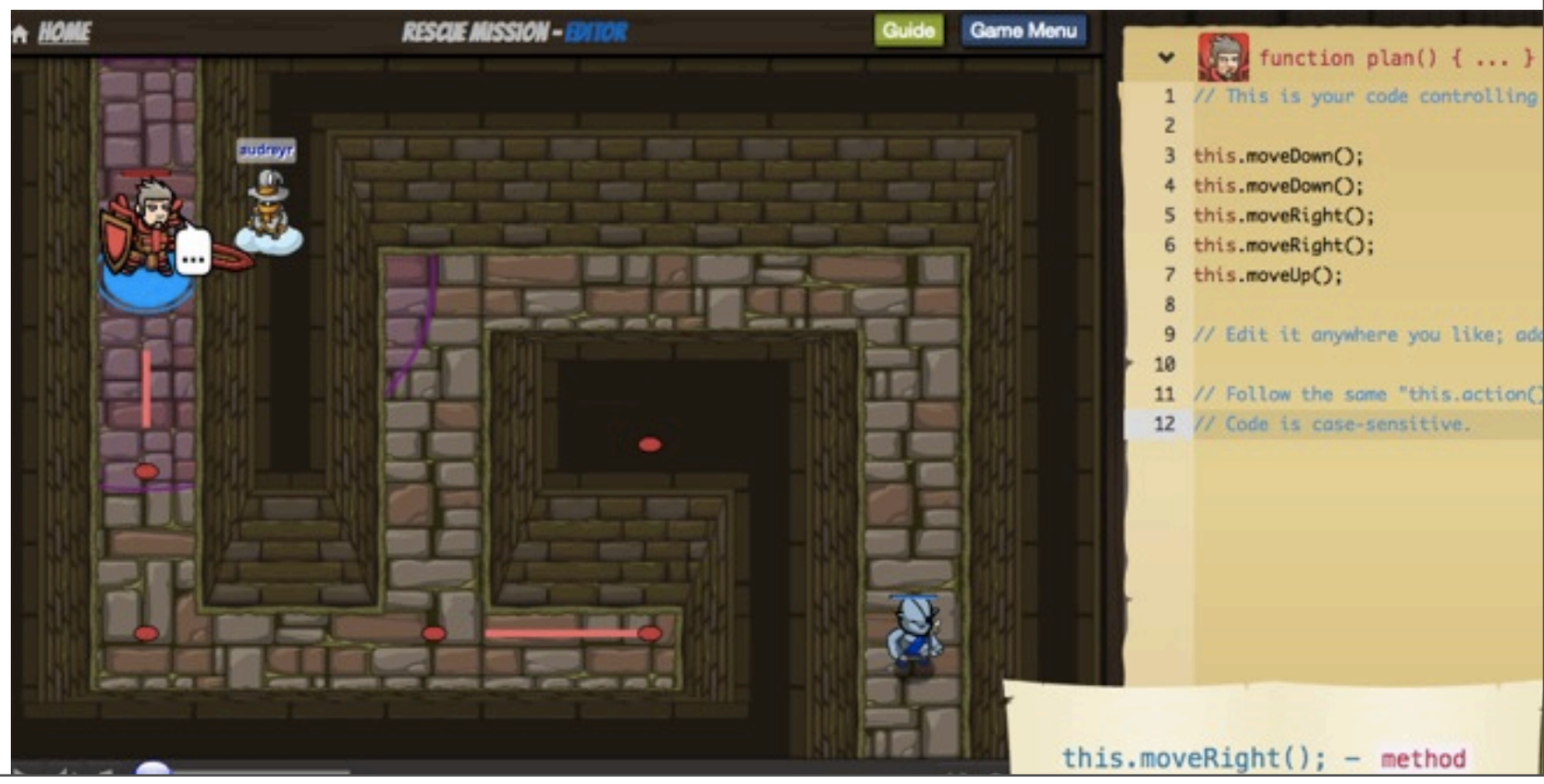
Sessions

Sep 15th 2014 - Nov 16th 2014

Interactive Python Walkthroughs/Games

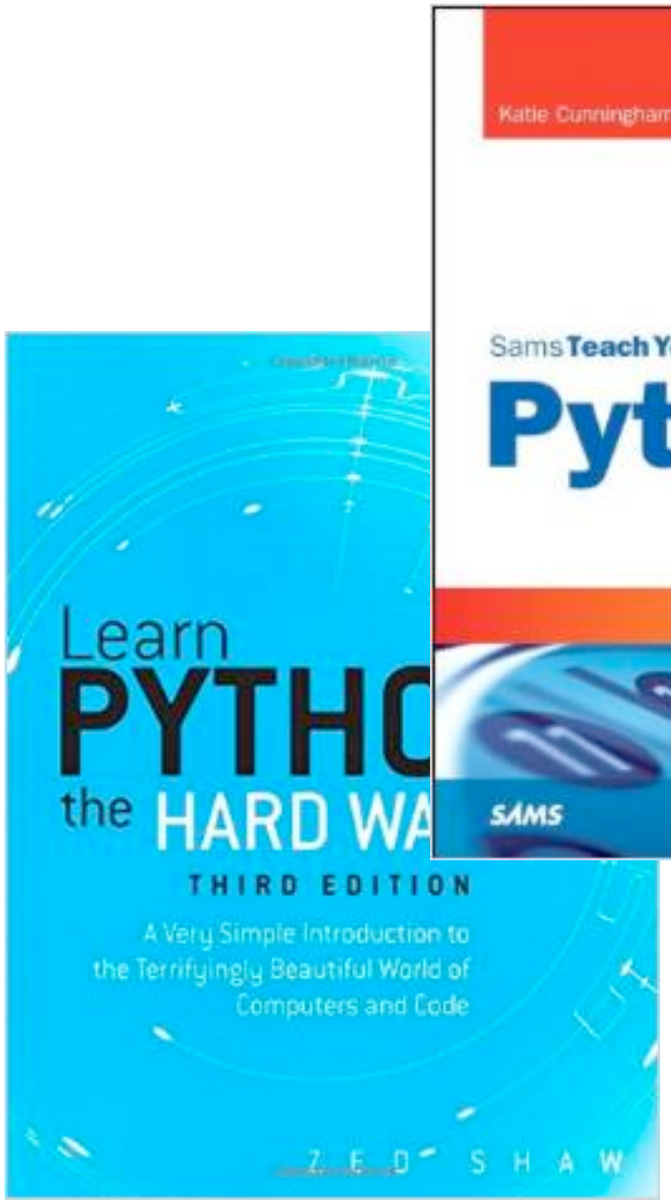
Websites that turn learning Python into an interactive experience or puzzle game:

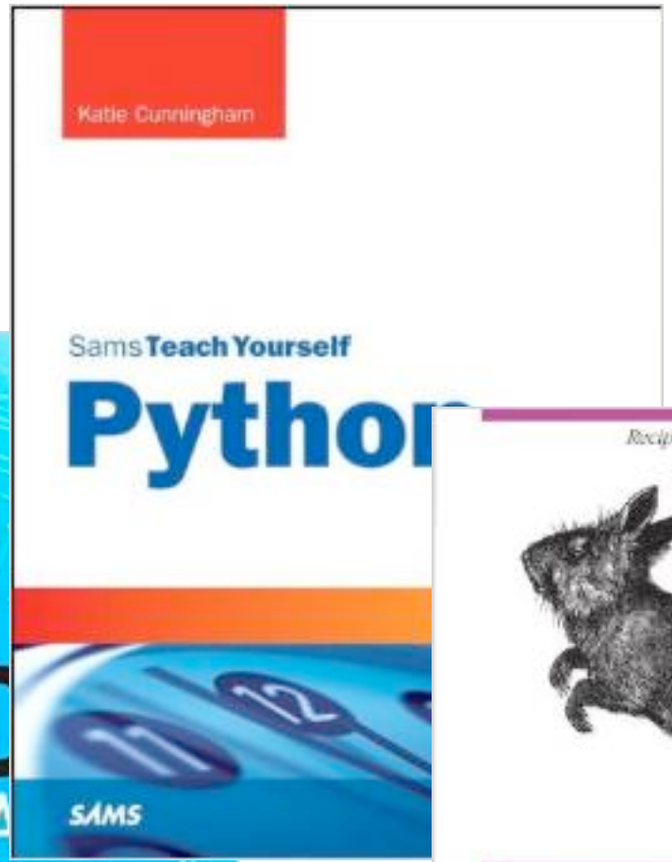
- codewars.com/?language=python
- codecademy.com/en/tracks/python
- codecombat.com
- pythontutor.com

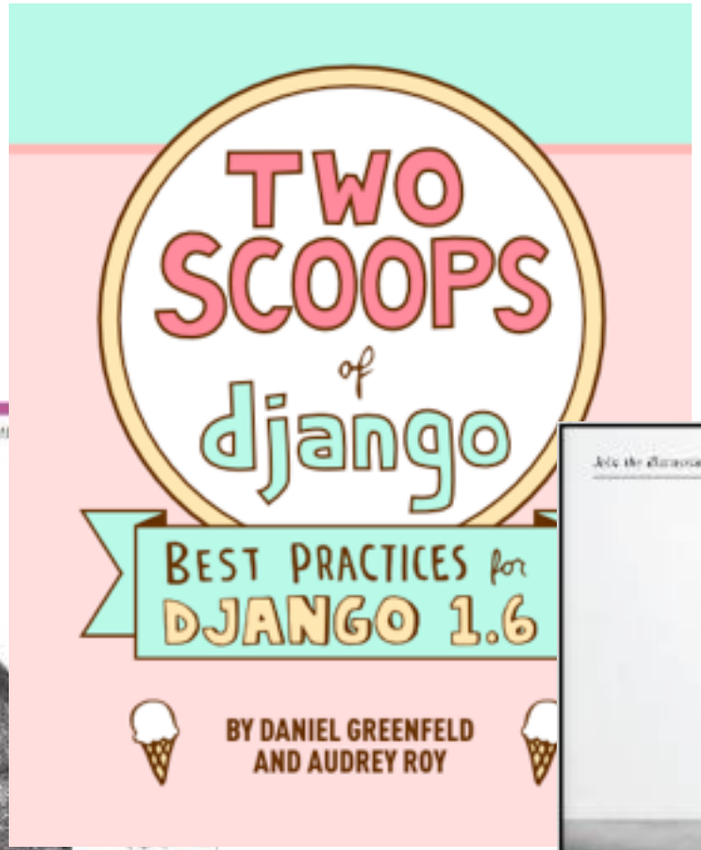


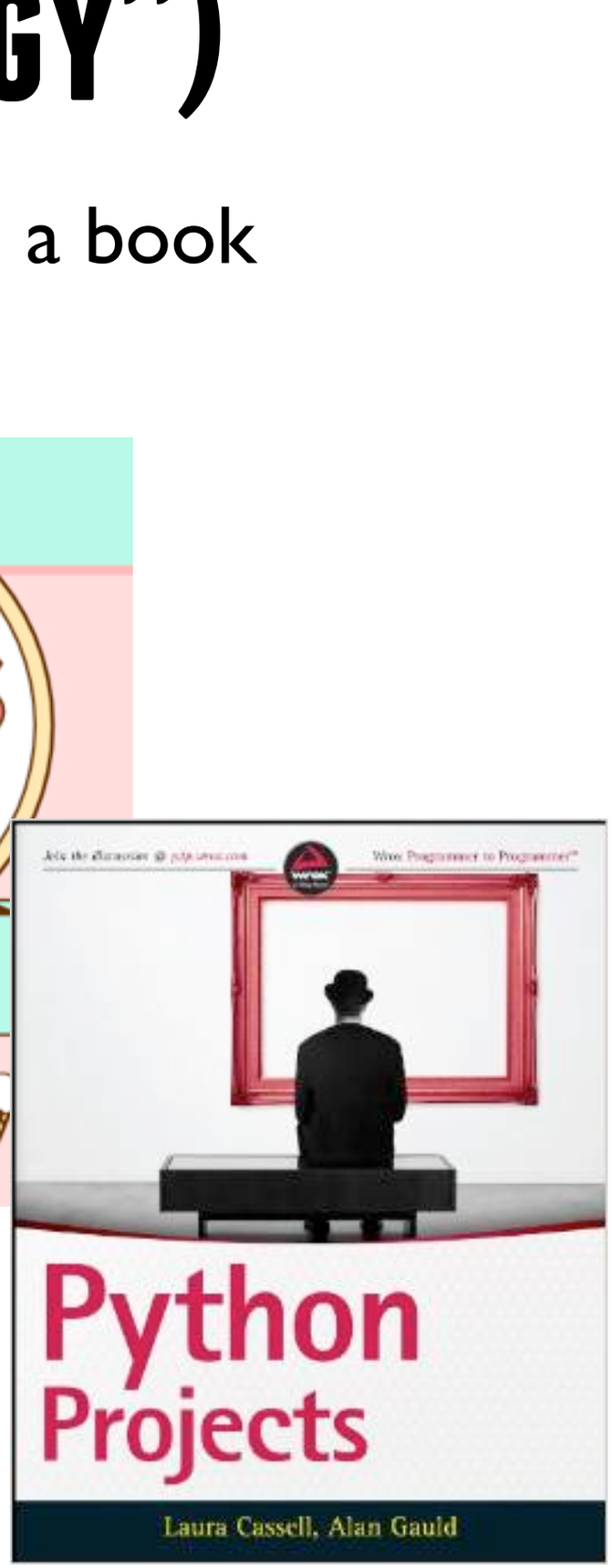
Books ("Old Technology")

There's still nothing quite like learning from a book the old-fashioned way.



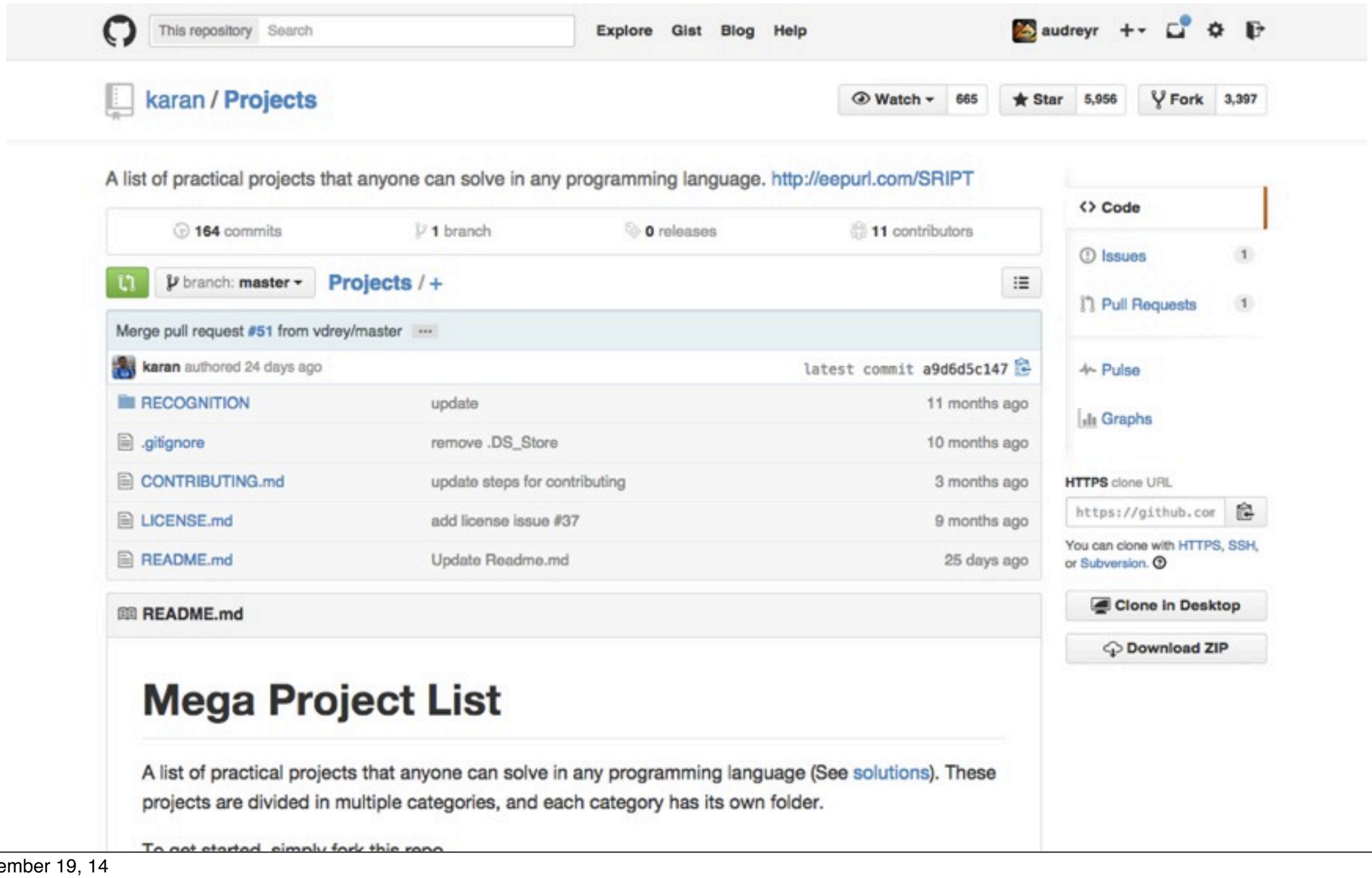






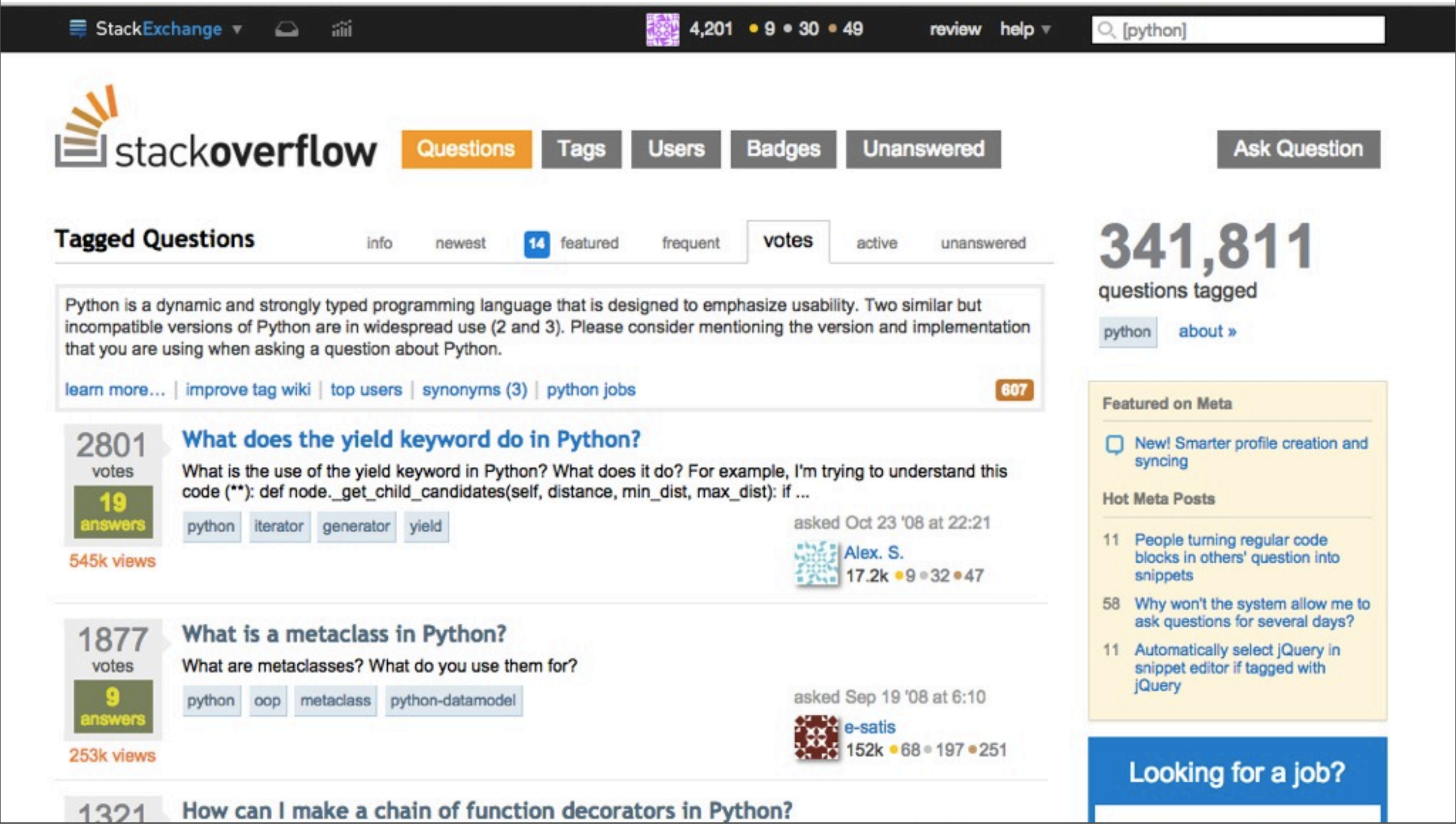
Your First Coding Project

Stuck without ideas? See Karan's Mega Project List:
https://github.com/karan/Projects



Ask Questions

Shy? Use a pseudonym. Many of us do that.



On the Internet, You Can Be Anonymous

Take advantage of it:

- Ask for help liberally!
- Put your code online, e.g. GitHub
- Try putting a package on PyPI and see what happens

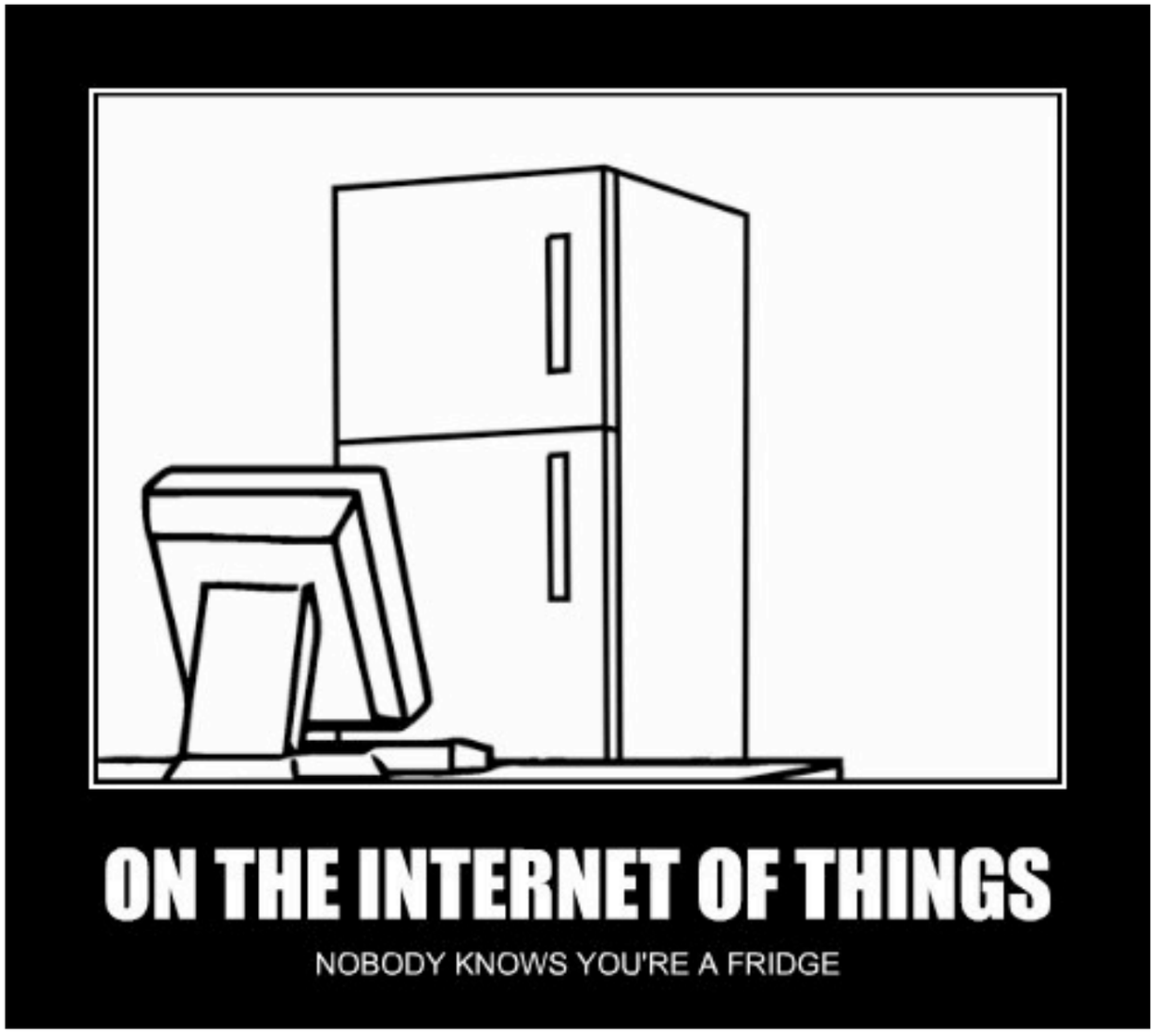
On the Internet, Nobody Knows You're a New Coder

"On the Internet, nobody knows you're a dog."

For all they know,
you could be a dog.

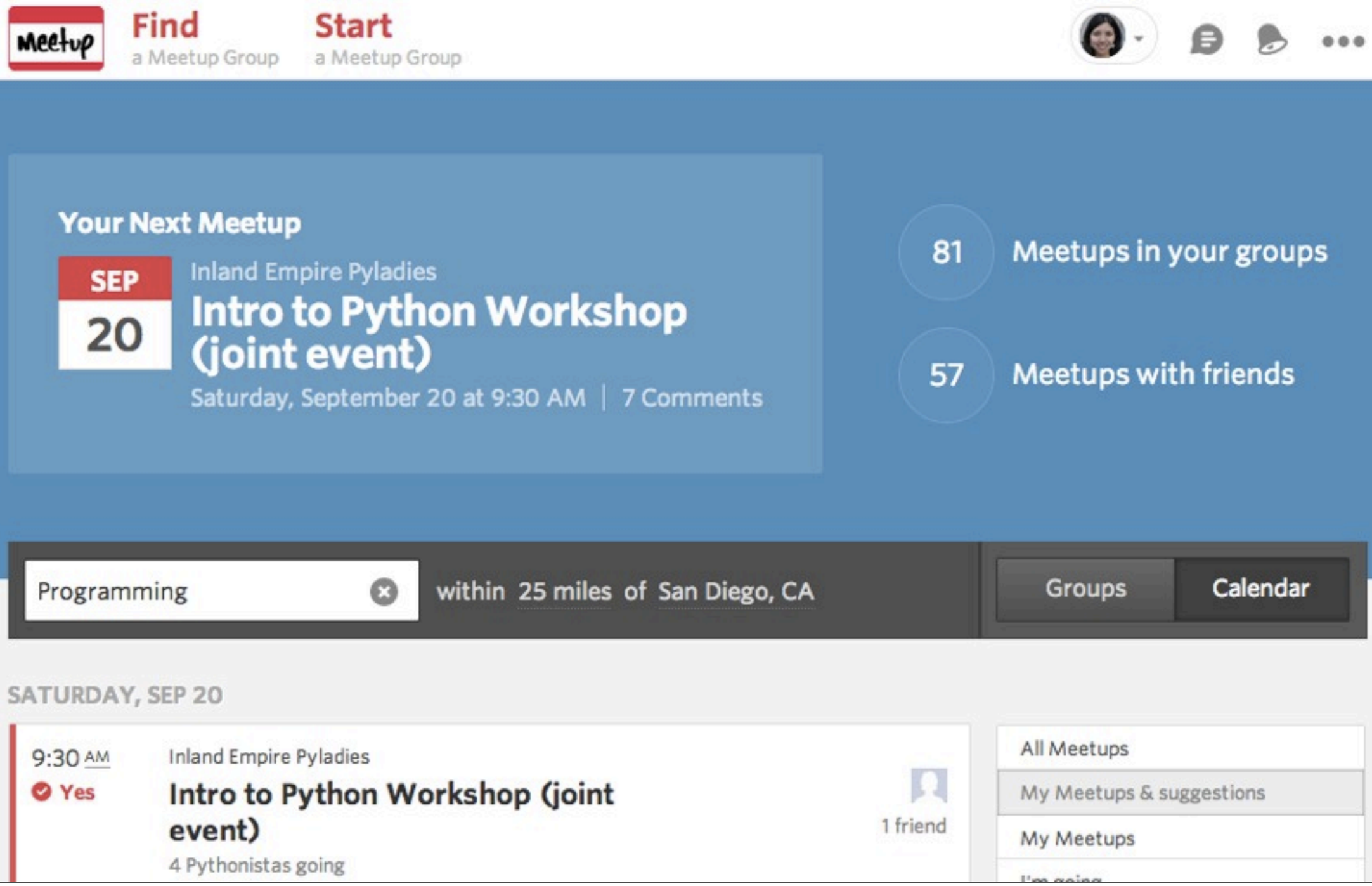
On the Internet, Nobody Knows You're a New Coder

Or even a fridge.



Attend Coding Meetups

Gotta catch ‘em all (free education, meet peers)



Join the Nearest PUG

PUG means Python User Group

San Diego Python
http://www.meetup.com/pythonsd/

San Diego Pyladies
http://www.meetup.com/pythonsd/

Too far from home? Search for others like Inland Empire Pyladies, Inland Empire Python, SoCal Python, LA Python, LA Pyladies, OC Python, etc.

Developer Conferences

Like a firehose of coding knowledge.

Great upcoming opportunity:
BarCamp Django SF ($15 tix!)

Other really good ones:

PyCon 2015
Montréal • April 8-16

SCALE 13x
The Thirteenth Annual
Southern California Linux Expo

Keep on Coding!

We are all unpaid volunteers, here because we want to help the community.

- So take the time to keep learning.
- You get as much out of this workshop as you put in.

Thank you!

Quick Survey

Please help us by doing this survey **right now**:

- https://www.surveymonkey.com/s/8KX9GGQ

Your feedback helps us plan future community workshops and events.