



Python Tutorial

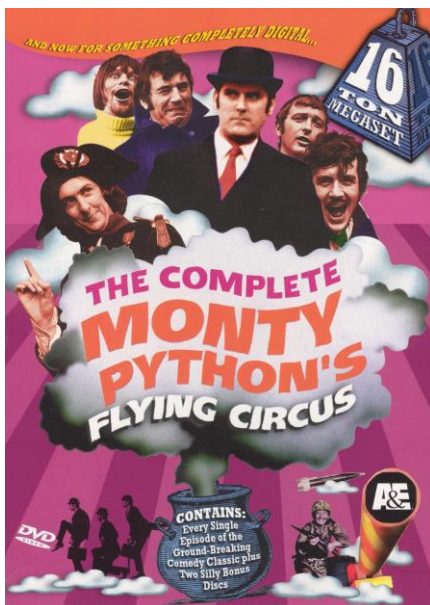


Python Overview

- Python is a **high-level, interpreted, interactive** and **object-oriented** scripting language.
 - Interpreted - Python is processed at runtime by the interpreter. You do not need to compile your program before executing it.
 - Interactive - You can actually sit at a Python prompt and interact with the interpreter directly to write your programs.
 - Object-Oriented - Python supports Object-Oriented style or technique of programming that encapsulates code within objects.
 - Python is a Beginner's Language – Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.



Python Overview













***“Life is short
(You need Python)”***

-- Bruce Eckel
ANSI C++ Comitee member,
author of «Thinking in C++» and «Thinking in Java»



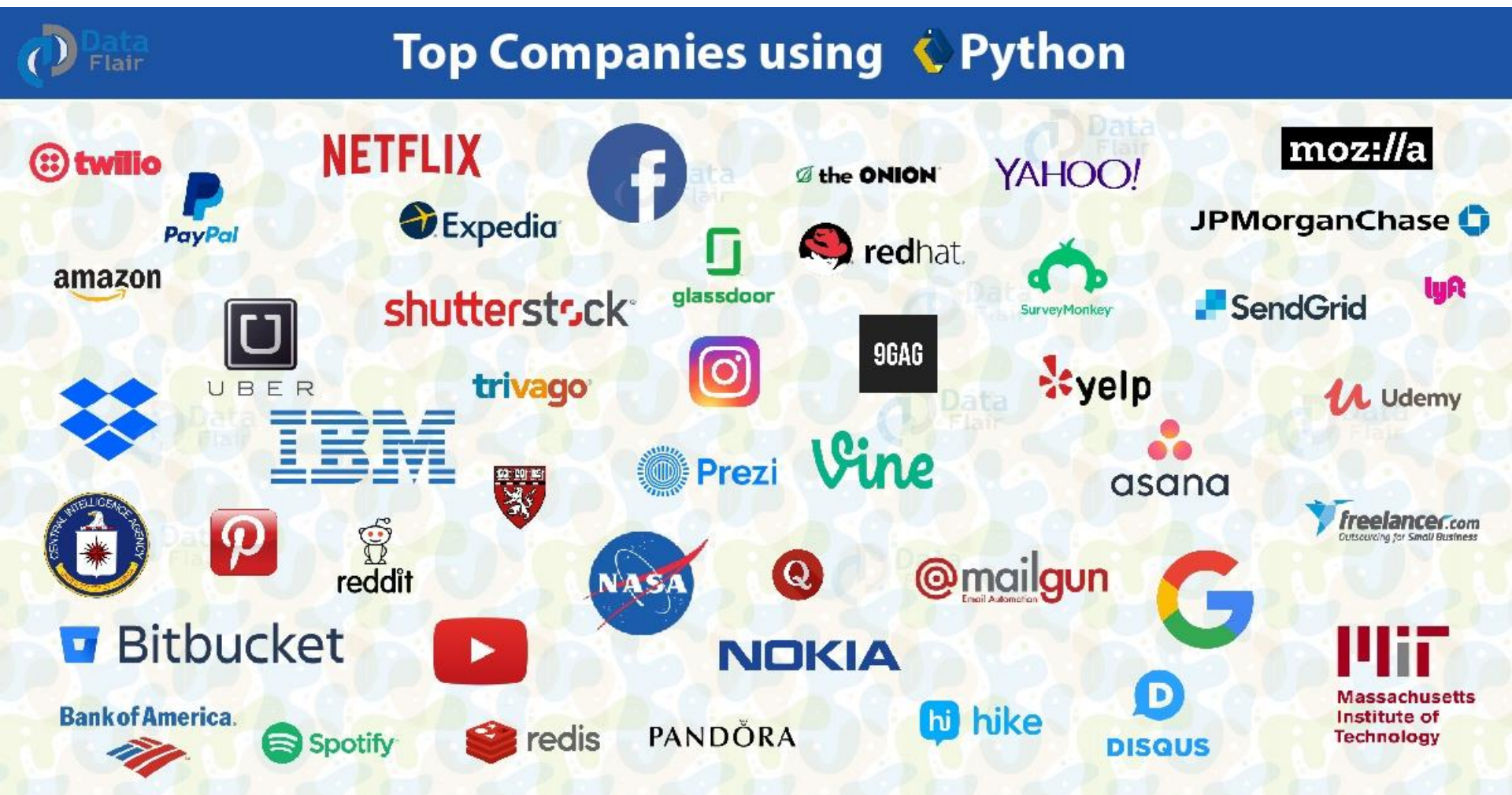
TIOBE Index for August 2021

Aug 2021	Aug 2020	Change	Programming Language		Ratings	Change
1	1			C	12.57%	-4.41%
2	3	↑		Python	11.86%	+2.17%
3	2	↓		Java	10.43%	-4.00%
4	4			C++	7.36%	+0.52%
5	5			C#	5.14%	+0.46%
6	6			Visual Basic	4.67%	+0.01%
7	7			JavaScript	2.95%	+0.07%
8	9	↑		PHP	2.19%	-0.05%
9	14	↑↑		Assembly language	2.03%	+0.99%
10	10			SQL	1.47%	+0.02%

<https://www.tiobe.com/tiobe-index/>



Top Companies Using Python





Python Job Positions

[www.linkedin.com › jobs › python-jobs ▼](#)

115,000+ Python jobs, careers in United States ... - LinkedIn

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7,000+ Junior Python jobs in United States (284 new) - LinkedIn

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Python Installation

Download the latest version for Mac OS X

Download Python 3.8.2

Looking for Python with a different OS? Python for [Windows](#),
[Linux/UNIX](#), [Mac OS X](#), [Other](#)



Python 2.7 will retire in...

0

Years

0

Months

0

Days

0

Hours

0

Minutes

0

Seconds

What's all this, then?

Python 2.7 [will not be maintained past 2020](#). Originally, there was no official date. Recently, that date has been updated to [January 1, 2020](#). This clock has been updated accordingly. My original idea was to throw a Python 2 Celebration of Life party at PyCon 2020, to celebrate everything Python 2 did for us. That idea still stands. (If this sounds interesting to you, email pythonclockorg@gmail.com).

Python 2, thank you for your years of faithful service.

Python 3, your time is now.



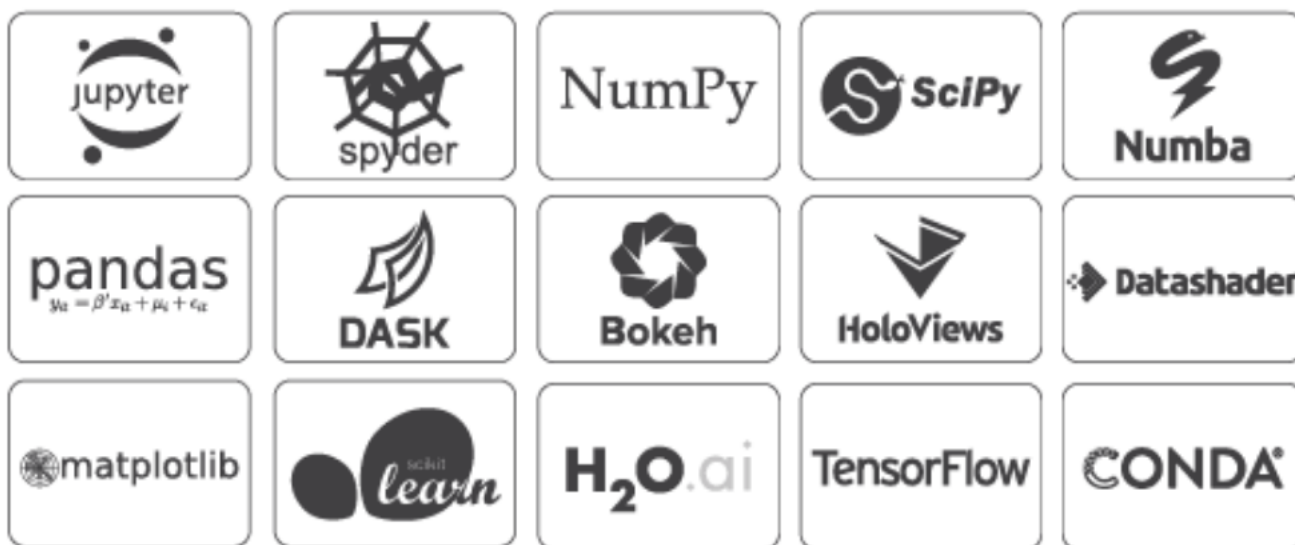
Required Python Modules

- NumPy (<https://numpy.org/>)
 - The fundamental package for array computing with Python.
- SciPy (<https://www.scipy.org/>)
 - A Python-based ecosystem of open-source software for mathematics, science, and engineering.
- Pandas (<https://pandas.pydata.org/>)
 - Python Data Analysis Library
- Matplotlib (<https://matplotlib.org/>)
 - Python plotting
- Scikit Learn (<https://scikit-learn.org/stable/>)
 - Machine learning in Python



All in One - Anaconda

- The open-source Anaconda Distribution is the easiest way to perform Python/R data science and machine learning on Linux, Windows, and Mac OS X. With over 19 million users worldwide, it is the industry standard for developing, testing, and training on a single machine.
- <https://www.anaconda.com/distribution/>





All in One - Anaconda

Anaconda Installers

Windows

Python 3.8

64-Bit Graphical Installer (477 MB)

32-Bit Graphical Installer (409 MB)

MacOS

Python 3.8

64-Bit Graphical Installer (440 MB)

64-Bit Command Line Installer (433 MB)

Linux

Python 3.8

64-Bit (x86) Installer (544 MB)

64-Bit (Power8 and Power9) Installer (285 MB)

64-Bit (AWS Graviton2 / ARM64) Installer (413 M)

ADDITIONAL INSTALLERS

The [archive](#) has older versions of Anaconda Individual Edition installers. The Miniconda installer homepage can be found [here](#).

<https://www.anaconda.com/products/individual>



Python Tutorial

- <https://github.com/kuleshov/cs228-material>

Tutorials for Stanford cs228 and cs231n

Preparatory material for the probabilistic graphical models and the deep learning classes at Stanford.

Material

This repo currently holds:

- A [tutorial](#) on basic Python/Numpy that is necessary to get started with the above machine learning classes.

You may follow the iPython notebook on github, or clone and execute it locally. The notebook is based on an [earlier version](#) prepared by Justin Johnson.



Any Questions

