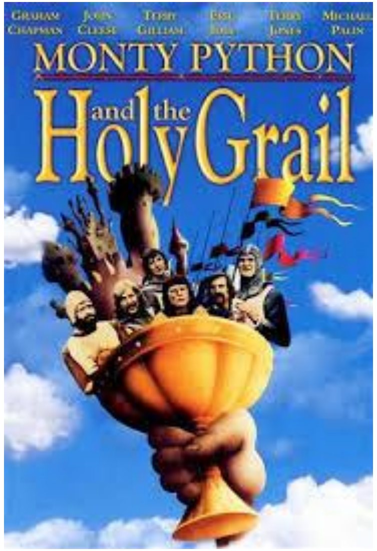
Python

CodeCachet.org
1/26/2019

Me

- David Geller
- Experienced programmer (Python, C, C++, java, JavaScript, Swift, Perl, php…)
- Last company, Veenome, used Python for video analysis

Important distinction

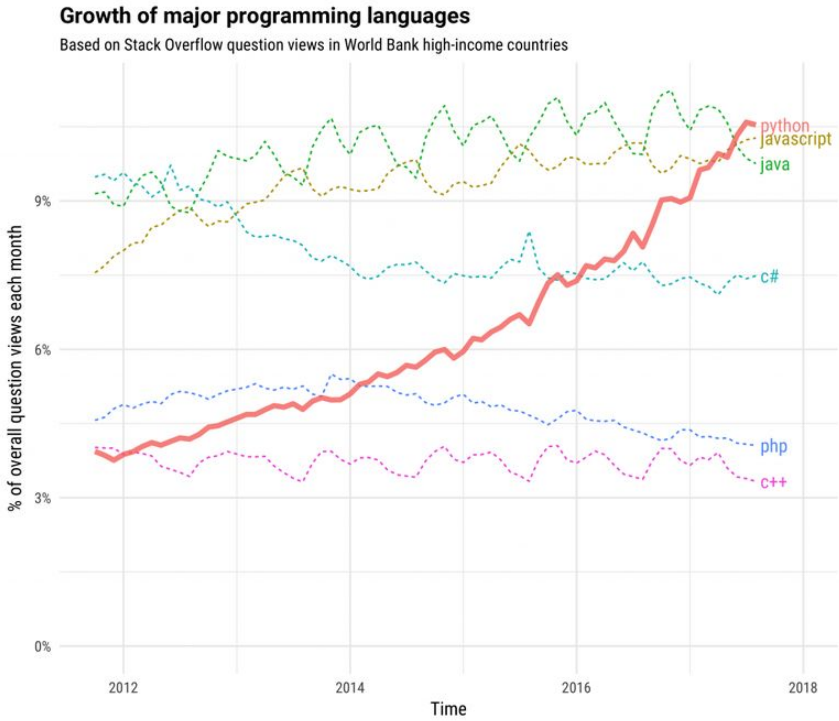


BDFL

Benevolent Dictator for Life

Guido van Rossum

Python popularity



Python for the Nobel Prize

Paul Romer, co-winner of 2018 Nobel Prize in Economics

Instead of using Mathematica, Romer discovered that he could use a Jupyter notebook for sharing his research. Jupyter notebooks are web applications that allow programmers and researchers to share documents that include code, charts, equations, and data. Jupyter notebooks allow for code written in dozens of programming languages. For his research, Romer used Python—the most popular language for data science and statistics.

Projects using Python

- Instagram
- Industrial Light and Magic
- Google
- Facebook
- Quora
- Netflix
- Dropbox
- Reddit
- Red Hat
- YouTube
- Pinterest
- Disqus
- Survey Monkey
- .....

Python uses

- Web development
- Data science
- Machine learning
- Content management systems
- Cryptography
- Games
- Web scraping
- Embedded systems
- Graphics
- Visualization
- Scripting

Python is....

- Interpreted
- A “scripting language”
- Dynamically-typed, Duck-typed, Strongly-typed
- Object oriented, imperative, with functional and async support
- Indentation/whitespace centric
- Carefully designed to be a general purpose language
- Supported by most major platforms (desktops, phones, tablets, embedded, supercomputers…)
- Extremely flexible
- Relatively easy to learn
- Relatively quick to code, slow to execute

Zen of Python

Beautiful is better than ugly.
Explicit is better than implicit.
Simple is better than complex.
Complex is better than complicated.
Flat is better than nested.
Sparse is better than dense.
Readability counts.
Special cases aren't special enough to break the rules.
Although practicality beats purity.
Errors should never pass silently.
Unless explicitly silenced.
In the face of ambiguity, refuse the temptation to guess.
There should be one-- and preferably only one --obvious way to do it.
Although that way may not be obvious at first unless you're Dutch.
Now is better than never.
Although never is often better than *right* now.
If the implementation is hard to explain, it's a bad idea.
If the implementation is easy to explain, it may be a good idea.
Namespaces are one honking great idea -- let's do more of those!

Python versions

- Version 2 (2.7.x)
- **Version 3 (3.7.2)**

Python implementations

- **Cpython**
- PyPy
- Jython
- MicroPython
- IronPython
- ...

Apps to have

- Python 3 (3.7)
  - python.org
- git
  - git-scm.com
- Visual Studio Code (vscode)
  - code.visualstudio.com

Optional

- atom
  - atom.io