

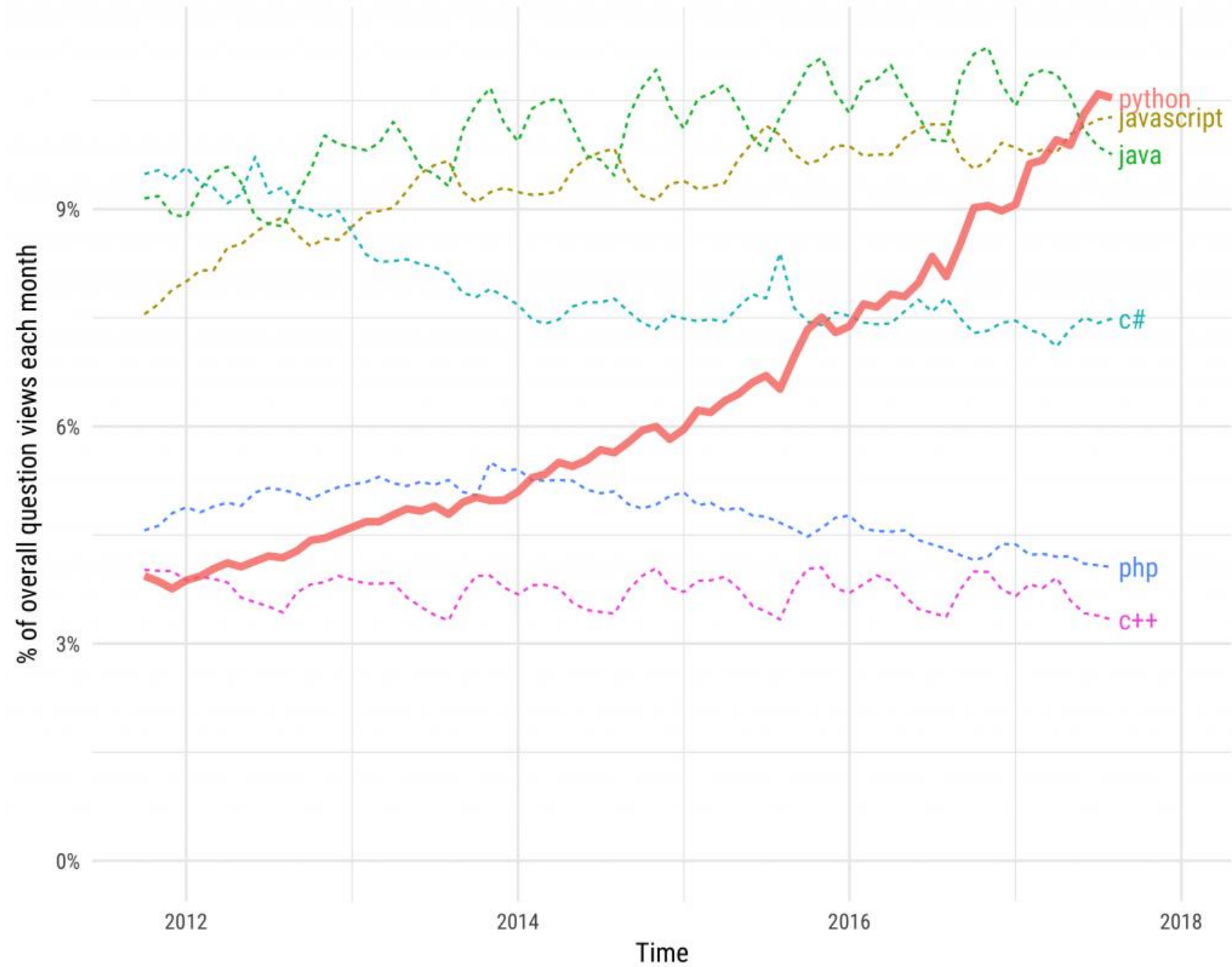


Data Analytics with Python

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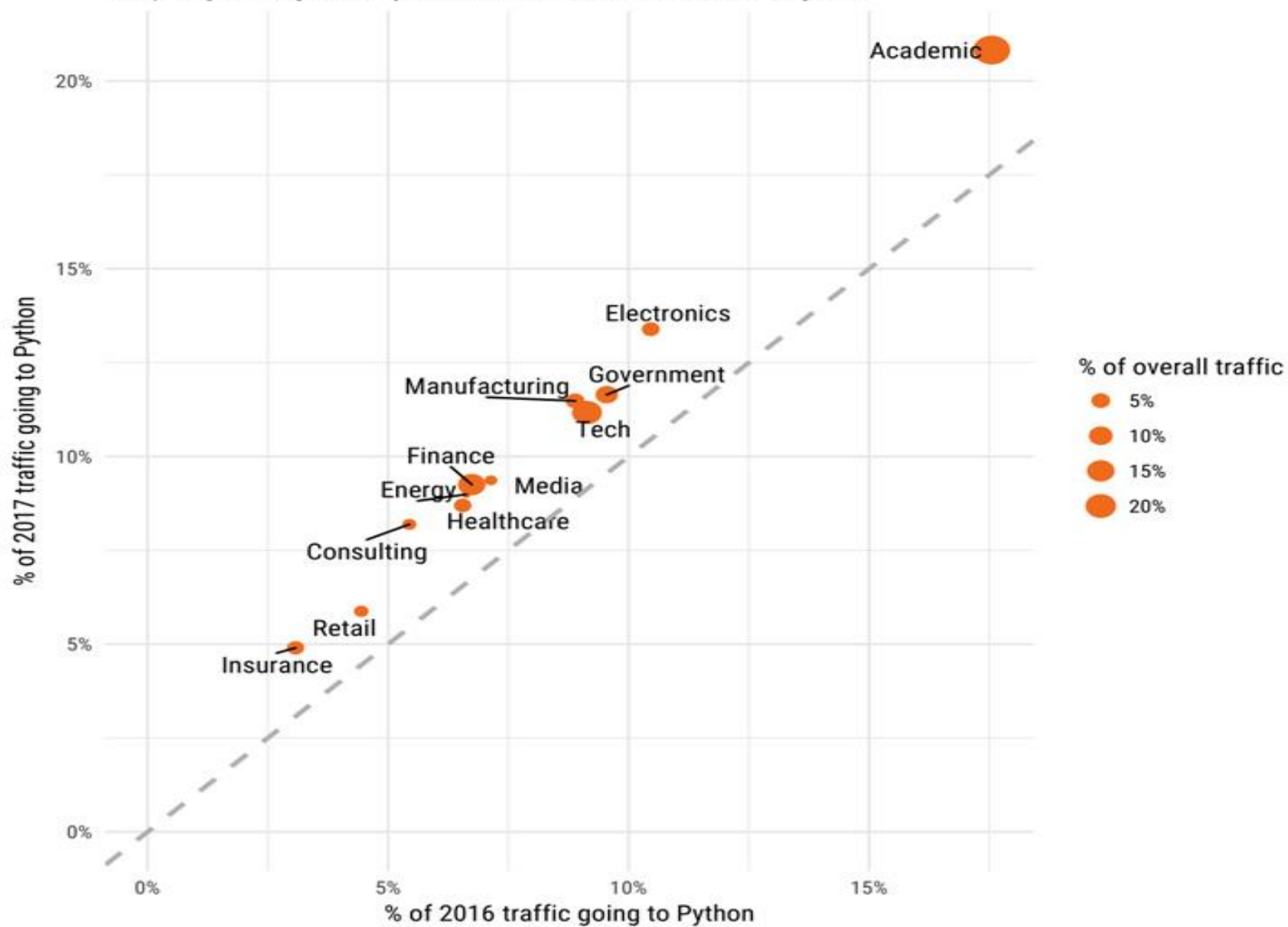
Growth of major programming languages

Based on Stack Overflow question views in World Bank high-income countries



Traffic by industry to Python

Comparing Jan-Aug of each year, in the United States and United Kingdom.



Applications of Python

1. Web & Internet Development

Python offers many choices for web development

- ✓ Frameworks such as Django and Pyramid.
- ✓ Micro-frameworks such as Flask and Bottle.
- ✓ Advanced content management systems such as Plone and django CMS.

2. Scientific and Numeric

Python is widely used in Scientific Programming.

- ✓ SciPy is a collection of packages for mathematics, science, and engineering.
- ✓ **Pandas** is a data analysis and modeling library.
- ✓ **IPython** is a powerful interactive shell that features easy editing and recording of a work session, and supports visualizations and parallel computing.

3. Education

4. Desktop GUI

- ✓ Libraries like TK and *toolkits* like wxWidgets, Kivy and QT via pyqt can be used to develop GUI Apps.

5. Software Development

Python is often used as Support Language for Software Developers.

- ✓ SCons for build control.
- ✓ Buildbot and Apache Gump for automated continuous compilation and testing.
- ✓ Roundup or Trac for bug tracking and project management.

6. Business Applications

Python is also used to build ERP and e-commerce systems:

- ✓ Odoo is an ***all-in-one management*** software that offers a range of business applications that form a complete ***suite of enterprise management applications***.
- ✓ Tryton is a ***three-tier high-level*** general purpose application platform.

Read: <https://www.python.org/about/apps/>

Who is using Python?

1. In Space

The **International Space Station's Robonaut 2 robot** uses **Python** for its central command system. Python is planned for use in a **European mission to Mars** in **2020** to collect ***soil samples***.

2. In Physics Laboratories

Python helps understand the data analysis from some atom smashing experiments at the CERN Large Hadron Collider.

3. In Astronomy

The **MeerKat Radio telescope array** (the largest radio telescope in the Southern Hemisphere) uses Python for its control and monitoring systems.

4. In Movie Studios

Industrial Light and Magic (Star Wars geniuses) uses Python to automate its movie production processes. Side Effects Software's computer-generated imagery program Houdini uses Python for its programming interface and to script the engine.

Python is widely in use for **Game Development, Music Industry, Video Industry, Internet Search Engine, Medicine, Operating System, IOT (Internet of Things)**.

Read: <http://www.dummies.com/programming/python/what-is-python-and-what-can-you-do-with-it/>

Python Installation

1. Python

<https://python.org>

2. Anaconda

<https://anaconda.org>

3. Visual Studio Code IDE

<https://code.visualstudio.com>

Discussion Groups

1. YouTube

<https://www.youtube.com/ashmanmalhotra>

2. Facebook

<https://www.facebook.com/groups/gopython/>

<https://www.facebook.com/gopython>

3. LinkedIn Professional Network

<https://www.linkedin.com/in/ashmanmalhotra/>

4. Slack Discussion Group for Python

<https://pythongems.slack.com> (Invitation Link: <https://goo.gl/g7Q43N>)