python™

Advanced Python

Python – Beyond the Basics

Python Fundamentals

Collections

Functions

Classes

virtual inheritance

multiple inheritance

single inheritance

constant use

occasional use

Python Fundamentals

Python – Beyond the Basics

Advanced Python

Decorators

Control Flow

duck typing

comprehensions

REPL

classes

packaging

modules

python™

exceptions

resources

standard library

iteration

collections

python
TM

Expressive Code

```
def fetch_words(url):
    """Fetch a list of words from a URL."""
    with urlopen(url) as story:
        story_words = []
        for line in story:
            line_words = line.decode('utf8').split()
            for word in line_words:
                story_words.append(word)
    return story_words
```

Powerful

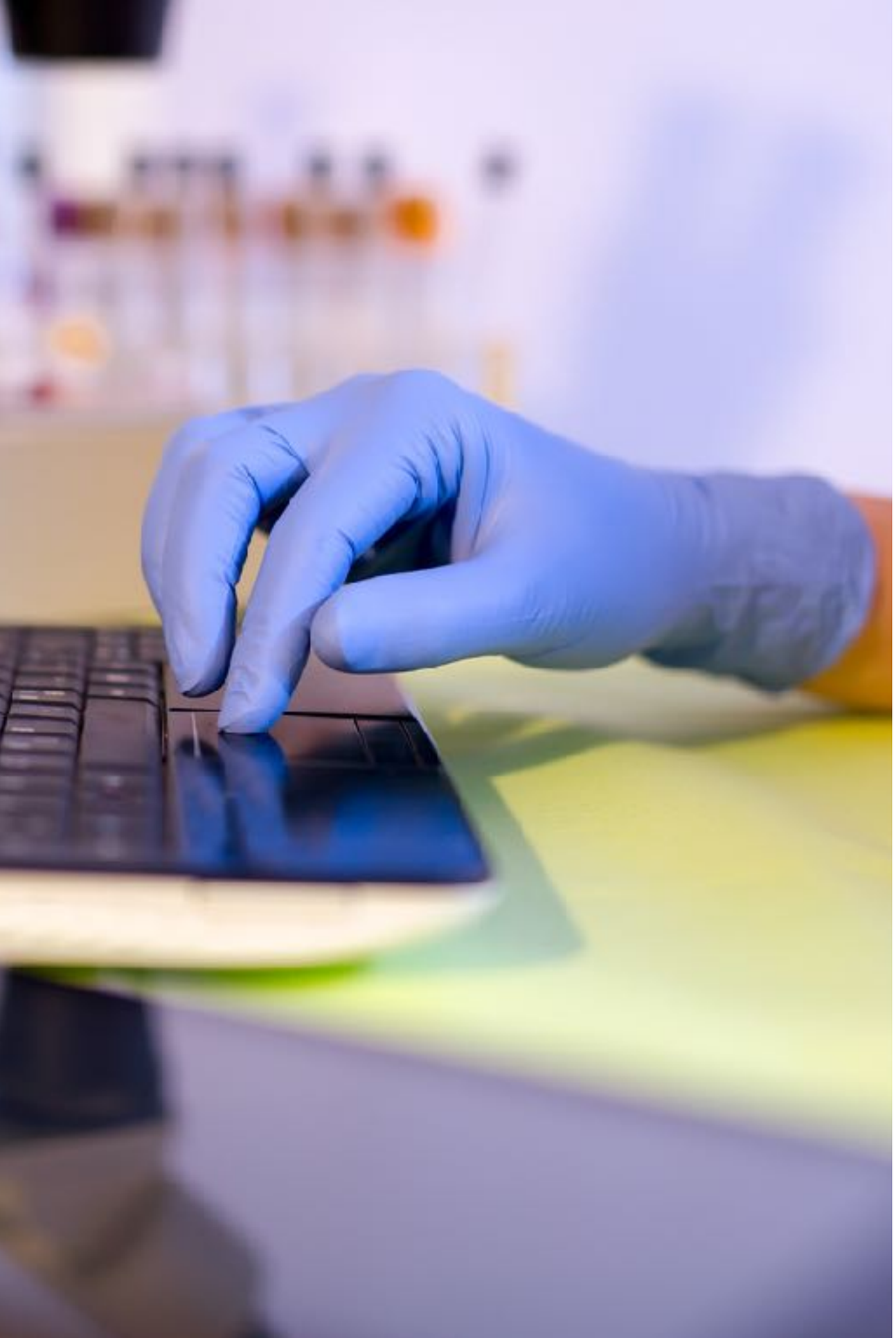
Productive Experience

python™

python

for web development

- django
- Flask — web development, one drop at a time
- Pyramid™



python

for science

astropy

biopython

NumPy

SciPy

python

for cloud configuration

Boto3 for

ANSIBLE

Microsoft Azure
SDK for Python

python

for
data analytics

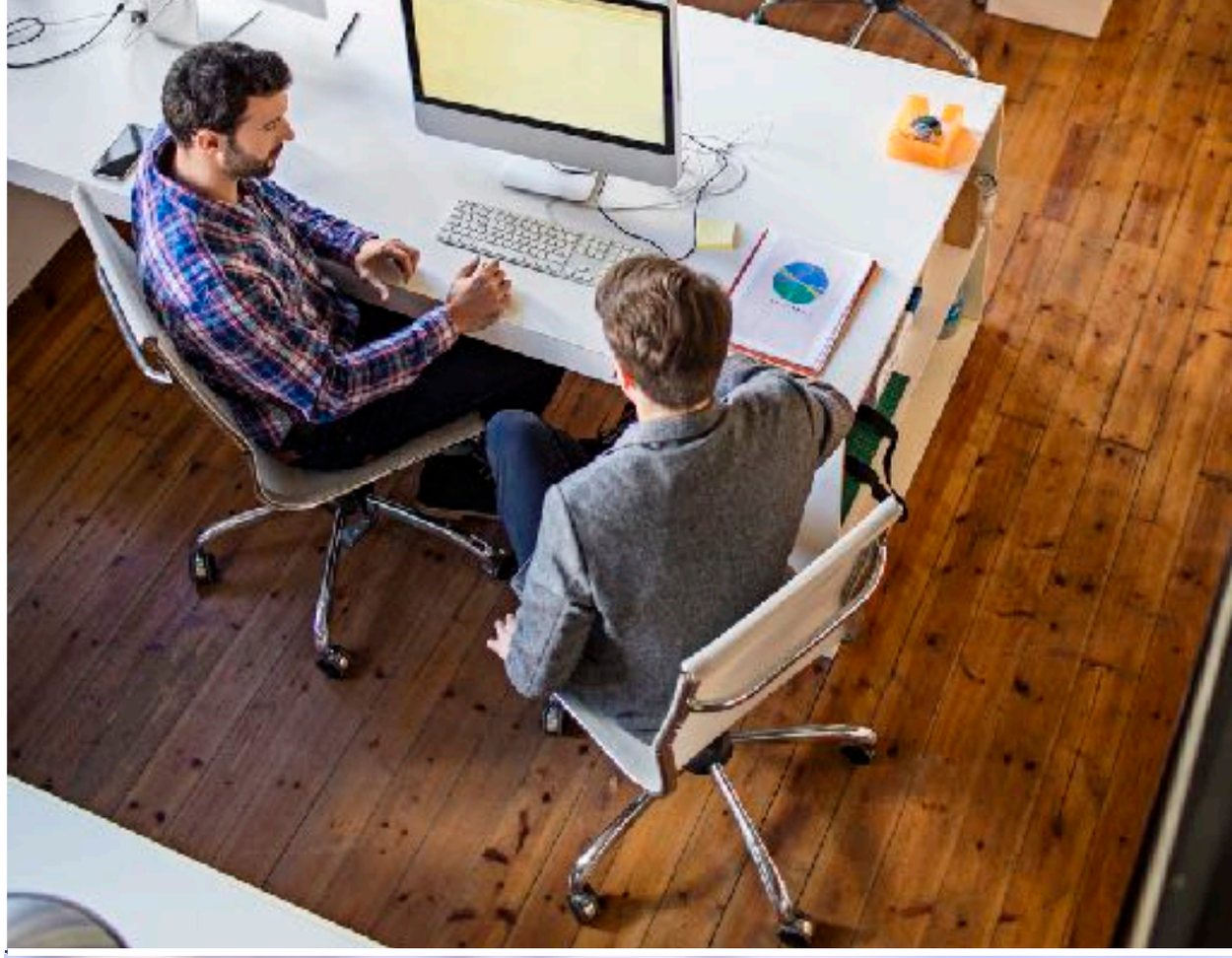
pandas

matplotlib

Bokeh

TensorFlow

scikit learn



Quickly

Safely

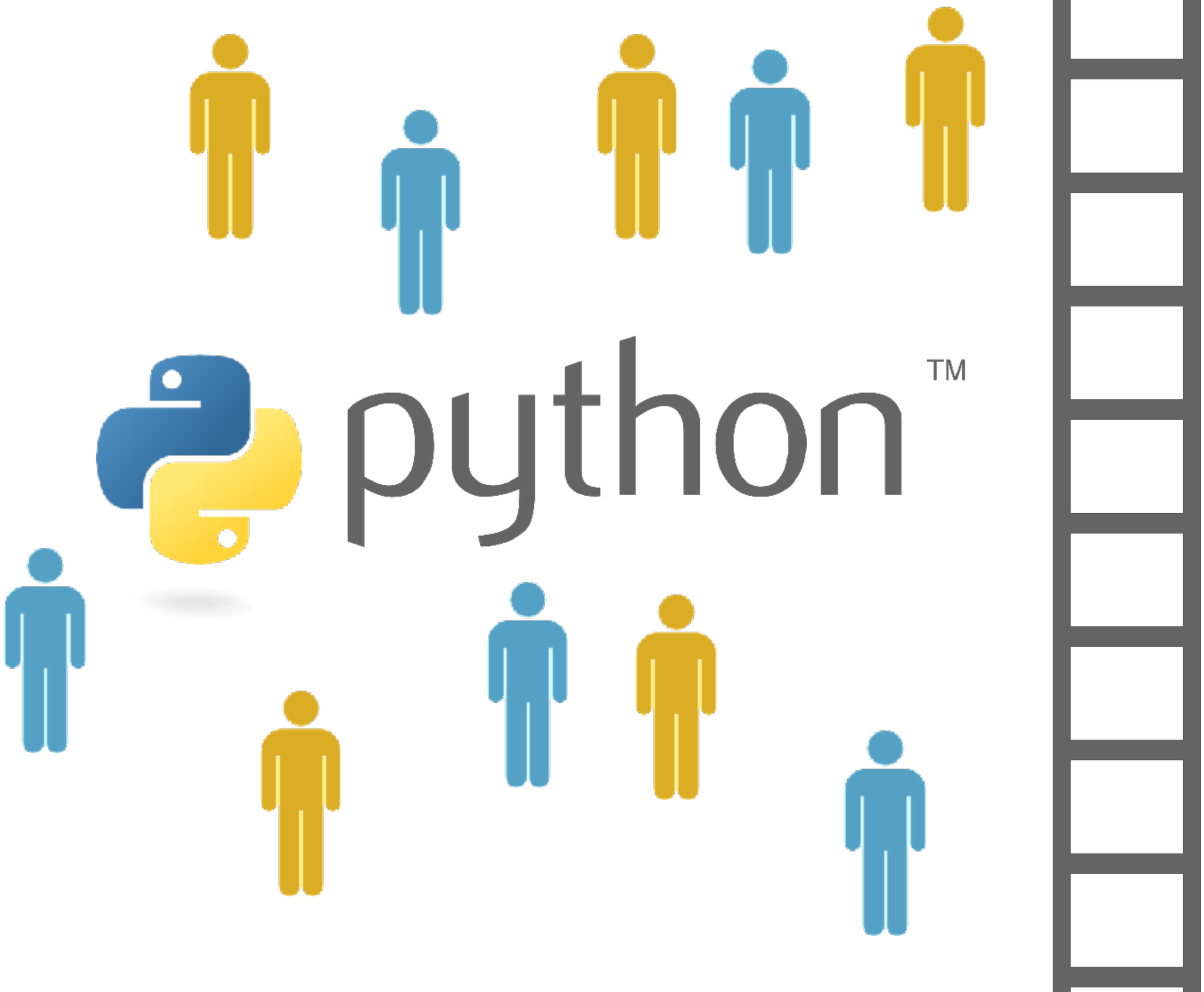
Efficiently

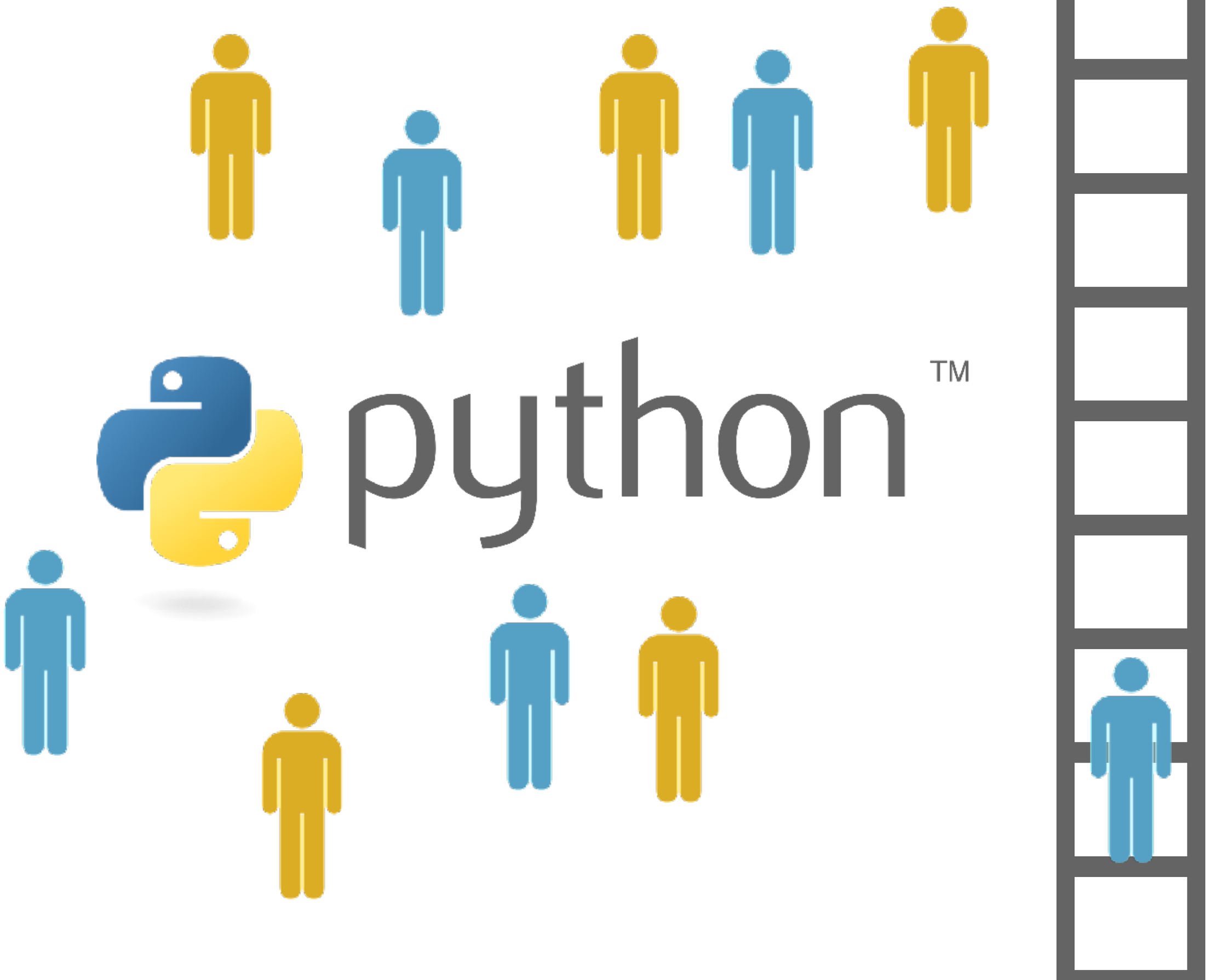
python
TM

python
TM

python
TM

python
TM


python
TM


python
TM

python
TM

FLOW

installation

language elements

features

idiomatic usage

standard library

Advanced Python

example-driven

Python – Beyond the Basics

Getting Started	Strings & Collections	Modularity	Built-in Types / The Object Model	Collections	Handling Exceptions	Comprehensions Iterables and Generators	Classes	Managing Files and Resources

language essentials

consume libraries

construct libraries

deliver code

python?

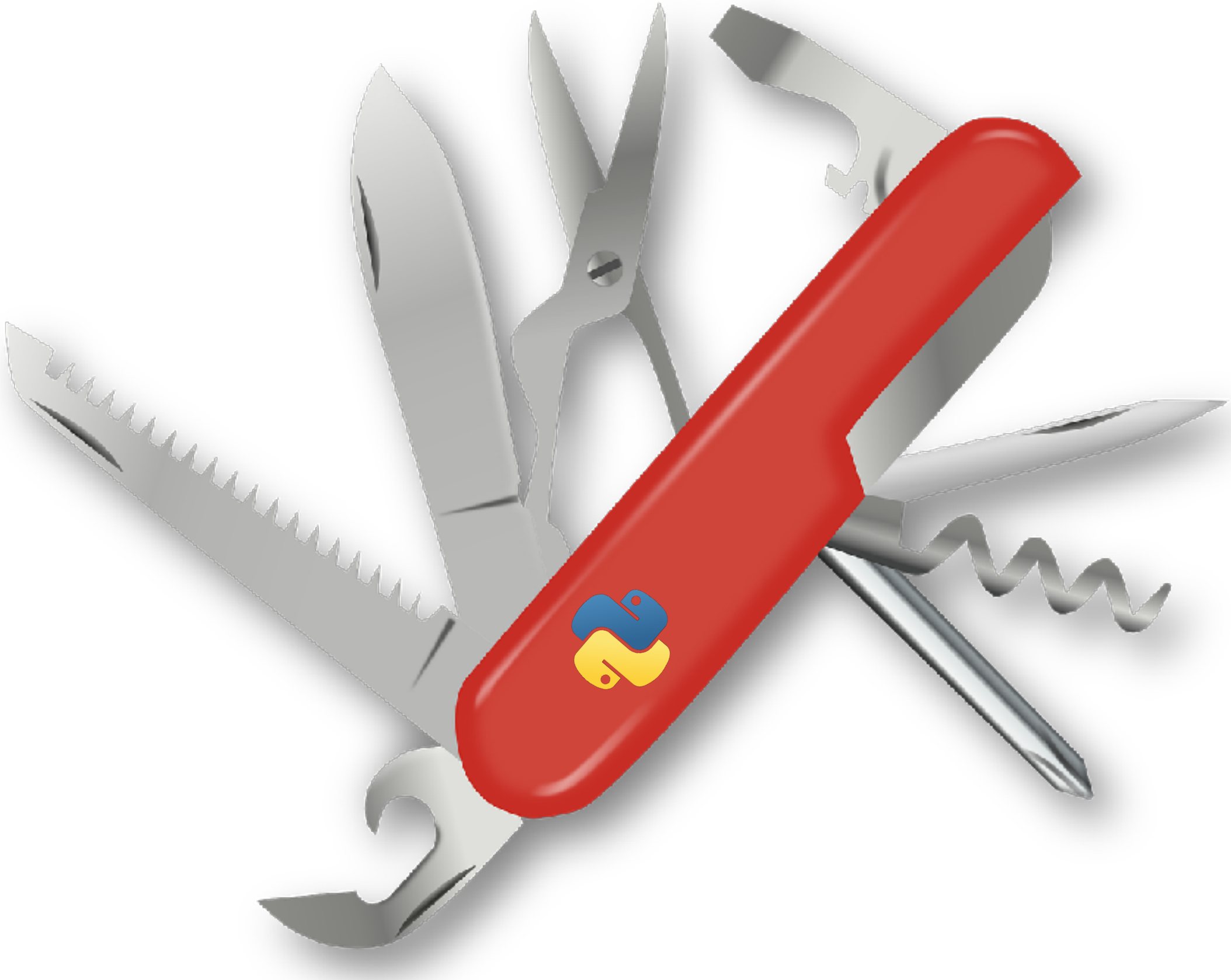
BDFL

The Netherlands

source: CIA World Factbook

Guido van Rossum

python SOFTWARE FOUNDATION



Who is using Python?

bitly

SurveyMonkey

esri

Google

CERN

esa

NASA

INDUSTRIAL LIGHT & MAGIC

openstack CLOUD SOFTWARE

YouTube

reddit

blender

Instagram

Dropbox

Quora

python™

- clear
- readable
- expressive

Python Implementations

Python implementation	written in	runs on
CPython	THE C PROGRAMMING LANGUAGE	native
Jython	Java	JVM
IronPython	C#	Microsoft® .NET
PyPy	RPython	native & others

Python Release Timeline

08 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Python 2

2.6 2.7

Python 3

3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7

Batteries Included

Python Standard Library

`string`	`numbers`	`pickle`
`difflib`	`fraction`	`marshal`
`textwrap`	`random`	`configparser`
`struct`	`itertools`	`hashlib`
`codecs`	`operator`	`logging`
`datetime`	`functools`	`time`
`heapq`	`filecmp`	`threading`
`weakref`	`tempfile`	`concurrent`
`copy`	`glob`	`email`
`pprint`	`linecache`	`asyncio`

etc., etc., etc!

python™

Write
Read
Discover
Adventure!

python
TM