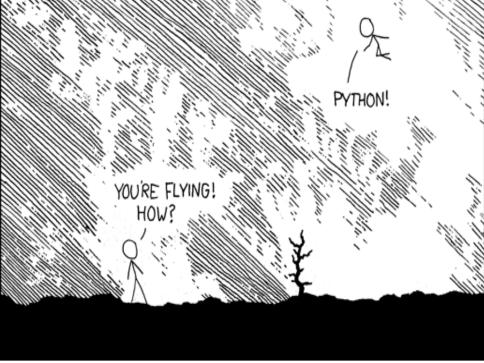
# Python intro

adam okulicz-kozaryn
adam.okulicz.kozaryn@gmail.com

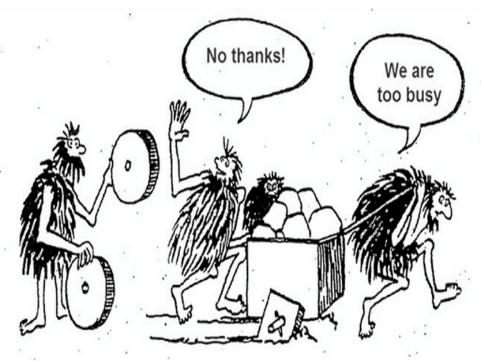
this version: Friday 1st April, 2022 14:55

## <u>outline</u>



## py is fun! and can accomplish so much more!

- why com sci while we're already busy with soc sci?
- so that you can do more soc sci and stop wasting time!
- don't say "no thanks! we are too busy"



#### references/tutorials

- we'll skip a lot of stuff, for more see:
- com sci, quick, readable! http: //code.google.com/edu/languages/google-python-class/
- looks fun https://automatetheboringstuff.com/#toc
- o eg email/text https://automatetheboringstuff.com/chapter16/
- o manipulate imageShttps://automatetheboringstuff.com/chapter17/
- general, complete, lengthy
  - http://www.diveintopython3.net/
- for soc sci, comprehensive
   http://nealcaren.github.io/python-tutorials/

## strategy/approach

- I won't bother you with dictionaries, tuples, etc
- I will introduce Python as for
- social data science or computational social science (CSS)
- don't have to do everything in Python
- o stata's (still) pronbably better for general dat man
- fine to skip most of the stuff
- but do pick up things that will be useful to you
- i am sure there will be some—Py can do just about anything!

#### but why another software for dat man?

- it's 2022!
- we have internet, social media, smartphones
- vast majority of data there
- cannot have data man class just doing spreadsheets
- and just numbers
- need to process text, make geo maps, etc
- stat software like Stata is behind

#### why not?

- although most user friendly general language,
- o still more difficult than Stata
- with Py, can do almost everything just in one lang
- but need to type more
- and much traditional soc sci data/stats functionality not (easily) available
- likewise, most of Py is for com sci, but quite a lot for soc sci!

## Python for soc sci

- automating os, like BASH scripts (os, system)
- data management (pandas)
- text processing (re, nltk)
- statistics (pandas, scipy, statsmodels, scikit-learn)
- API (urllib, rauth)
- o gis (pysal)
- web scrapping (beautifulsoup, scrappy, html5lib)
- o beautiful graphs, I'd say THE BEST (pandas, matplotlib)
- o and much more!

#### feel

- very clean
- transparent, easy to figure out what is going on
- o almost like human language
- I find it much more user friendly than R

#### where is it?

- can install on your PC: free and cross-platform
- O https://www.anaconda.com/download
- we will just run online on goog colab notebook
- can even run from within stata
- but need stata >=16, eg https://apps.camden.rutgers.edu/novnc
- but may be difficult to install aditional packages and may be clunky in general

#### py from within stata

- either say in command win "python" and it turns into Py
- or in dofile, eg:

```
python
print("hi I'm python")
end
```

- there are basic packages but installation of additional ones may be tricky on public machine
- but if doing on your machine, just install conda,
- and install packages with pip (like on colab)
- and then can import these packages within stata
- tho I will only show in stata basic stuff like re

#### indentation

- indentation is part of syntax!
- with loops, "if else" statements, programs, etc
- you have to indent
- so no braces { and } like in Stata foreach loop
- just indentation
- actually makes sense—you should indent anyway
- so the braces are unnecessary
- this is Python: cleanliness first!
- we'll see examples