

Python intro

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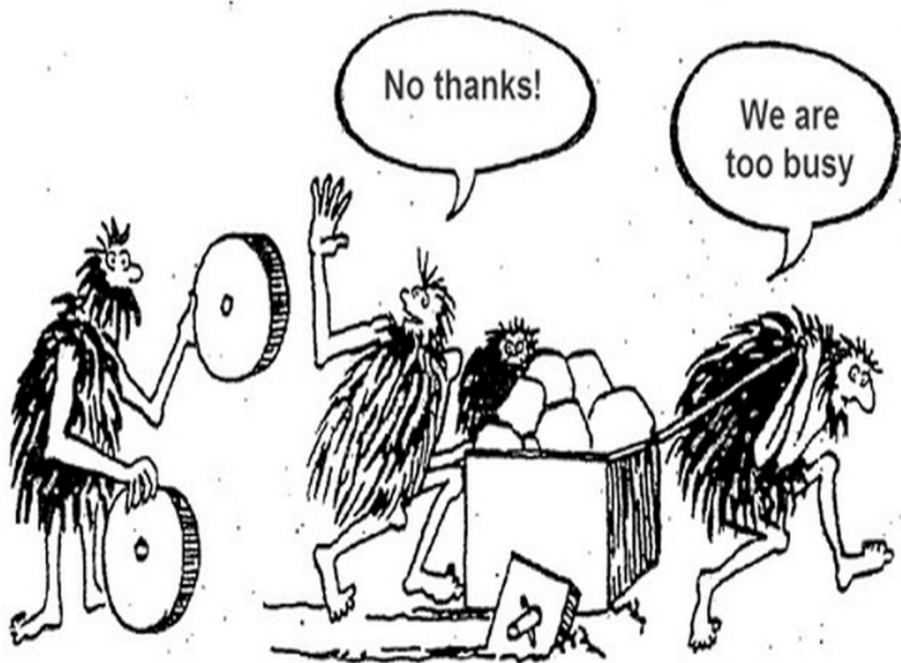
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PYTHON!

YOU'RE FLYING!
HOW?





references/tutorials

- ◇ com sci, quick, readable! <http://code.google.com/edu/languages/google-python-class/>
- ◇ cool! fun!
<https://automatetheboringstuff.com/#toc>
- ◇ general, complete, lengthy
<http://www.diveintopython3.net/>
- ◇ for soc sci, comprehensive
<http://nealcaren.github.io/python-tutorials/>

why Python?

- ◇ most user friendly, fun to use, 'glue', and general
- ◇ unlike qgis, sas, Stata, R,
 - Python is a regular (hi-lev) programming (scripting?) lang
- ◇ a good idea to learn a general language
 - it can do everything that computers can do!

Python for a social scientist

- automating os, like BASH scripts (os, system)
- data management (pandas)
- text processing (re, nltk)
- statistics (pandas, scipy, statsmodels, scikit-learn)
- API (urllib, rauth)
- gis (pysal, geopandas, folium)
- web scrapping (beautifulsoup, scrapy, html5lib)
- beautiful graphs, I'd say THE BEST (pandas, matplotlib)
- ◇ these spiffy Nature, Science, PNAS graphs are Python!
 - <https://matplotlib.org/gallery.html> [power usr]
 - <https://pandas.pydata.org/pandas-docs/stable/visualization.html>

feel

- ◇ most fun of all i've tried
- ◇ very clean (i find it more friendly than R)
- ◇ transparent, easy to figure out what is going on
 - almost like human language
- ◇ object-orineted: everything is an object:
dataset, variable, number, etc

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!

IDE/GUI: Spyder: `/usr/local/anaconda/bin/spyder`

- ◇ kind of like Stata or RStudio
- ◇ on the left we have code
- ◇ and it runs on the right in 'console'
- ◇ and some other less useful windows that you can drop
- ◇ at the top a bunch of menu items
- ◇ but most of the time just highlight code you want to run
 - and hit:
 - green 'play' triangle icon with blue rectangle to the left
 - or better just press Ctrl-Enter to run selection
 - note: for win paths may need double backward slash \\