introduction

Adam Okulicz-Kozaryn

adam.okulicz.kozaryn@gmail.com

this version: Thursday 13th September, 2018 13:42

outline

misc

why data management?

VCS: git

Stata v other software

let's fire up stata

[*] bonus–data sources [skip, can look at home]

outline

misc

why data management?

VCS: git

Stata v other software

let's fire up stata

[*] bonus–data sources [skip, can look at home]

about myself...

- theaok.github.io
- and more importantly http://scholar.google.com/citations?hl=en&user=pz9RYloAAAAJ&view_op=list_works&sortby=pubdate
- and i mostly use: wvs, gss, brfss, and other surveys
- if you use same data then i can share my code with you!
-
- except grades and ps submission on Sakai, everything at: theaok.github.io/dirStu

yourself? (see if others overlap: can collaborate!)

- ◇ research interests and data?
- ◇ software? eg SAS, SPSS, Stata, Python, R
- ◇ specific expectations for this class?
- ●
- ● [i'll email you some data based on your interets; bother me for more!]

weekly labs

- smalll class so will just flip it often, esp in 2nd part

mission statement/core values

- replication [replication.pdf]
- coding/programming; no pointing-clicking
- collaboration, sharing, open-source
- be lazy! (copy from others incl my code)
- it is a directed study, so you must have the topic and data or figure it out asap!

outline

misc

why data management?

VCS: git

Stata v other software

let's fire up stata

[*] bonus–data sources [skip, can look at home]

data management is fundamental

- ◇ in order to analyze data you need to manage it first
- ◇ GIGO (Garbage In Garbage Out)

  if data management fails, data analysis fails

preparing data vs analyzing data

- ◇ it takes more time to prepare data than to analyze it
- ◇ it may take years to prepare a dataset, and hours to analyze it
- ◇ it may be hundreds of lines of code to prepare dataset and several lines to analyze it
- ◇ start early !

it's all about productivity

- productivity = output/time $\approx$ \$
- reuse your code, copy from others, google
- minimize time spent on coding
- do other things: eg read journal articles, books
- be strategic: do spend time on coding if this will cut more time later than you invest now doing it

outline

misc

why data management?

VCS: git

Stata v other software

let's fire up stata

[*] bonus–data sources [skip, can look at home]

git

- git is a software that tracks code and facilitates code sharing (collaboration)
- we will also use it for assignment submission
- so git is mandatory
- probably github.com is easiest
- but many options out there and you can use any
- for more eleaboration see `theaok.github.io/dirStu#git`

outline

misc

why data management?

VCS: git

Stata v other software

let's fire up stata

[*] bonus–data sources [skip, can look at home]

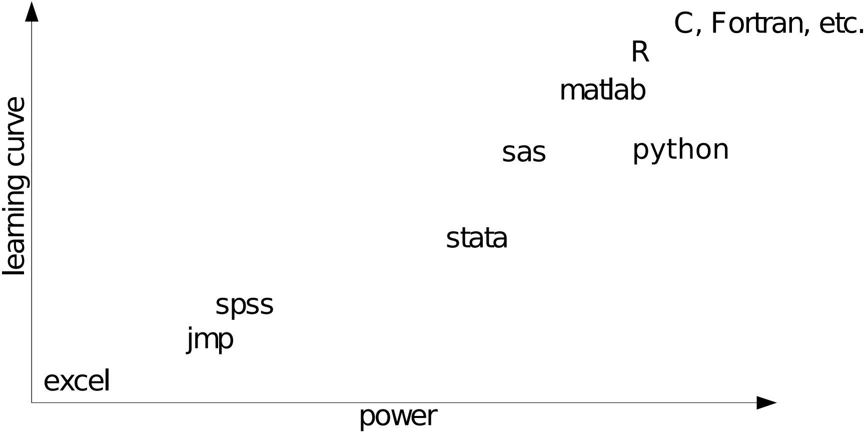
a critical decision!

- it takes months to get productive with software
- it takes years to master software
- huge time investment
- in soc sci dat man the choice is: Sas, Stata, R, Python
- there's more (Lisrel, HLM, etc) but the above are major
- excel and spss are junk that no one should use

which one?

- Stata: powerful, no need to learn any other software; sufficient for vast majority of projects: data analysis, data management and graphics
- R: most powerful statistical software (and coming up!)
- Stata: user friendly, fast, very concise code
- R: user unfriendly, slow; weird code!
- Stata, R: great user community: listserv, websites, etc.
- Sas: a dinosaur (still, often industry standard), very verbose
- R: free, Stata: around $200; sas over $1k

which one?


C, Fortran, etc.
R
matlab
sas
python
stata
spss
jmp
excel
learning curve
power

which stata

stata editions	**# observations**	**# variables**
small(student version) [useless!]	1,000	99
Intercooled (standard version)	based on ram in your computer	2,047
se [for large datasets]		32,767
mp (multi-processor) [fastest]		32,767

- just use Stata-IC (Intercooled), perpetual license: ≈$200
- email `gp@stata.com` for details

outline

misc

why data management?

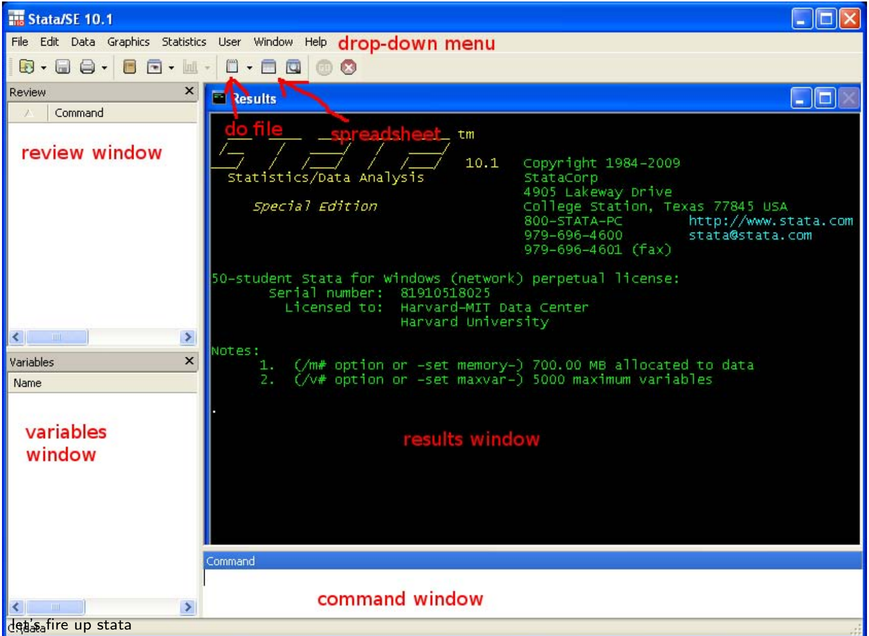
VCS: git

Stata v other software

let's fire up stata

[*] bonus–data sources [skip, can look at home]

stata interface; and do intro.do



```
                                                  tm
                                         10.1   Copyright 1984-2009
   Statistics/Data Analysis                     StataCorp
                                                4905 Lakeway Drive
       Special Edition                          College Station, Texas 77845 USA
                                                800-STATA-PC        http://www.stata.com
                                                979-696-4600        stata@stata.com
                                                979-696-4601 (fax)

50-student Stata for Windows (network) perpetual license:
       Serial number:  81910518025
         Licensed to:  Harvard-MIT Data Center
                       Harvard University

Notes:
      1.  (/m# option or -set memory-) 700.00 MB allocated to data
      2.  (/v# option or -set maxvar-) 5000 maximum variables

.
```

let's fire up stata

looking

- exploring your data is critical!
- we will learn many commands to understand data
- most basic: `d` `sum` `tab`
- remember this:
  - to manage data well, you need it to understand it well
  - it takes a lot of time to understand it well, and hence
  - either manage data you are already familiar with
  - or data that you are ready to invest a lot of time into knowing
- again, the bottomline in this class is to manage data that is of great interest to you

outline

misc

why data management?

VCS: git

Stata v other software

let's fire up stata

[*] bonus–data sources [skip, can look at home]

data.gov

- `http://www.data.gov/`

data sources

- ◇ http://www.worldvaluessurvey.org/
- ◇ http://www.norc.uchicago.edu/GSS+Website/
- ◇ http://www.icpsr.umich.edu/icpsrweb/ICPSR/
- ◇ http://www.thearda.com/
- ◇ http://ksghome.harvard.edu/~pnorris/Data/Data.htm

more data sources

- http://www.measureofamerica.org/
- http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20388241~menuPK:665266~pagePK:64165401~piPK:64165026~theSitePK:469382,00.html
- http://usa.ipums.org/usa/
- https://international.ipums.org/international/

“non-traditional” data

- http://dvn.iq.harvard.edu/dvn/dv/patent
- http://www.trustlet.org/wiki/Trust_network_datasets

happiness data

- ◇ http://www.bmj.com/content/337/bmj.a2338.full
- ◇ http://apps.facebook.com/usa_gnh/
- ◇ http://www.facebook.com/notes/facebook-data-team/relationships-and-happiness/304457453858
- ◇ http://www.springerlink.com/content/757723154j4w726k/fulltext.pdf
- ◇ http://www.wefeelfine.org/

facebook data

◇ http://apps.facebook.com/usa_gnh/

◇ http://www.facebook.com/notes/facebook-data-team/relationships-and-happiness/304457453858

◇ http://www.facebook.com/notes/facebook-engineering/visualizing-friendships/469716398919

◇ http://cyber.law.harvard.edu/node/4682

◇ http://www.thefacebookproject.com/resource/datasets.html

more data

- http://www.stateoftheusa.org/blog.php
- http://www.stateoftheusa.org/content/health-measures-for-the-develo.php
- http://www.stateoftheusa.org/content/fbi-report-violent-crime-down.php
- http://www.stateoftheusa.org/content/economy-seen-as-prompting-cohabitation.php
- http://stateoftheusa.org/content/measuring-economic-well-being.php
- http://www.stateoftheusa.org/content/report-hispanics-outlive-other-american.php

LaTeX

- we may have a separate class, but some links follow:
- `http://people.hmdc.harvard.edu/~akozaryn/myweb/latex/`
- `http://www.ats.ucla.edu/stat/stata/latex/default.htm`
- i will post my do-files that output into LaTeX