introduction

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outline

why data management?

Stata v Sas v R

let's fire up stata

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

introductions

◇ https://theaok.github.io

◇ and see my goog scholar

◇ and i will tell you what data i have been using

◇ if you use same data then i can share my code with you!

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

· research interests and data?

· software? eg sas, spss, stata, python, r

· specific expectations for this class?

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data revolution!!

$\diamond$ there are many jobs and there will be more that require programming

$\diamond$ there will be more jobs like that because we have more and more data: twitter, facebook, netflix etc

$\diamond$ these jobs will even ask you for a sample of your code

$\diamond$ data will be more important in any field

$\diamond$ qualitative data (pictures, text, etc.) are just rich quantitative data and can be analyzed like quantitative!

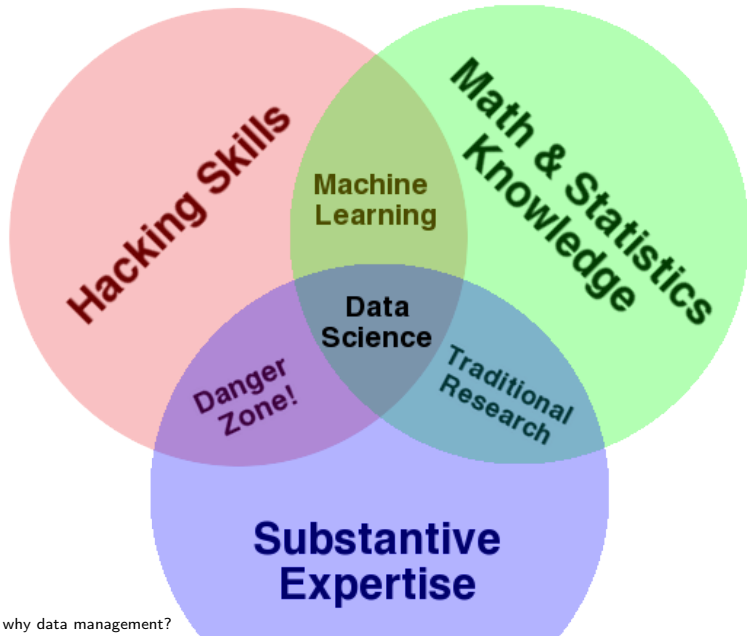$\diamond$ everything can be quantified or not? any examples of non-quantifiable things ?

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

◇ takes more time to prepare data than to analyze it

◇ start early with the right data!

(social) data science or CSS (comp soc sci)

◇ http://gking.harvard.edu/files/LazPenAda09.pdf

◇ a person good at computer programming (eg stata)

◇ a person who can manage, visualize and infer useful information from data

◇ need to like programming

◇ willing to learn programming beyond stata, eg python

◇ http://radar.oreilly.com/2010/06/what-is-data-science.html

◇ http://tdwi.org/Articles/2011/01/05/Rise-of-Data-Science.aspx?Page=1

◇ http://www.quora.com/Educational-Resources/How-do-I-become-a-data-scientist

already have stat/math and subst, need hacking!

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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 soft; sufficient for vast majority of projects

◇ r: most powerful stat soft (Py seems to be taking over)

◇ stata: user friendly, fast, very concise code

◇ r: user unfriendly, slow; weird code!

◇ py: somewhere in between

◇ all: great user community: listserv, websites, etc.

◇ sas: a dinosaur (still, often industry standard), very verbose

◇ r,py: free, stata: around $300; sas over $1k

which one?

◇ "stata is for people getting things done; r is for geeks showing off"

◇ "people using canned software like stata don't know what they are doing"

◇ CONSIDER:

· your supervisor/field usage

· are you a geek?

· do you need to do things that almost nobody does?

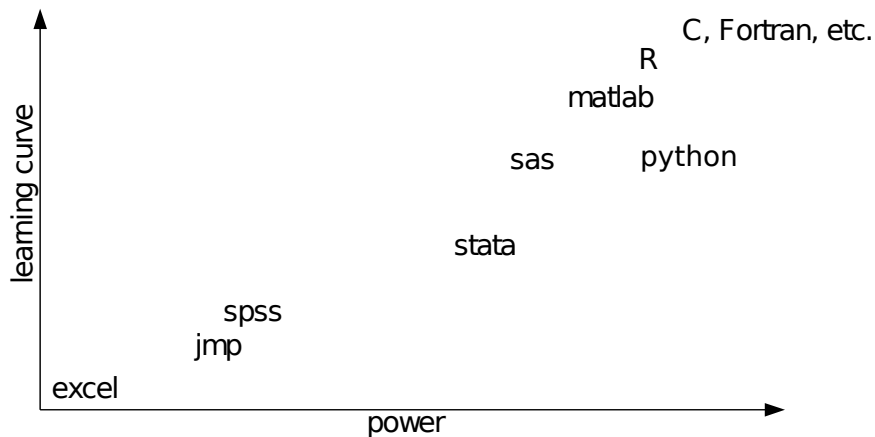· what's your style? (software is like cars or handbags)

spss

R

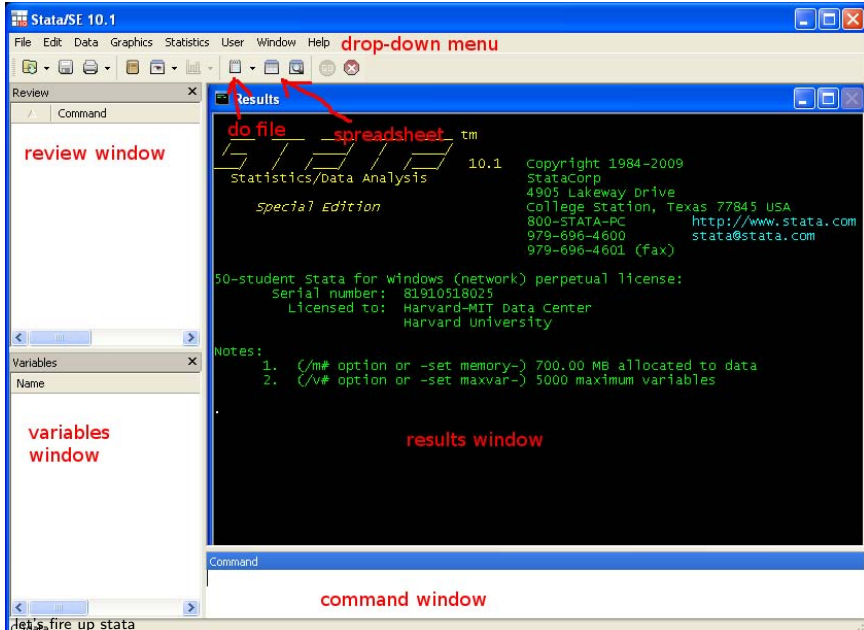sas `   13/26

which one?

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stata interface; and do intro.do

looking

$\diamond$ exploring your data is critical!

$\diamond$ we will learn many commands to understand data

$\diamond$ most basic: `d` `sum` `tab`

$\diamond$ 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

$\diamond$ again, the bottomline in this class is to manage data that is of great interest to you

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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

$\diamond$ http://dvn.iq.harvard.edu/dvn/dv/patent

$\diamond$ 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

$\diamond$ we may have a separate class, but some links follow:

$\diamond$ http://people.hmdc.harvard.edu/~akozaryn/myweb/latex/

$\diamond$ http://www.ats.ucla.edu/stat/stata/latex/default.htm

$\diamond$ i will post my do-files that output into LaTeX