introduction

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outline

why data management?

Python v R v Stata

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

introductions (see if others overlap: collaborate!)

- `https://theaok.github.io`
- your research interests and data?

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data revolution!!

- ◇ most jobs/tasks require or benefit from programming
- ◇ qualitative data (pictures, text, etc.) are just rich quantitative data and can be analyzed like quantitative!
- everything can be quantified or not? any examples of non-quantifiable things ?

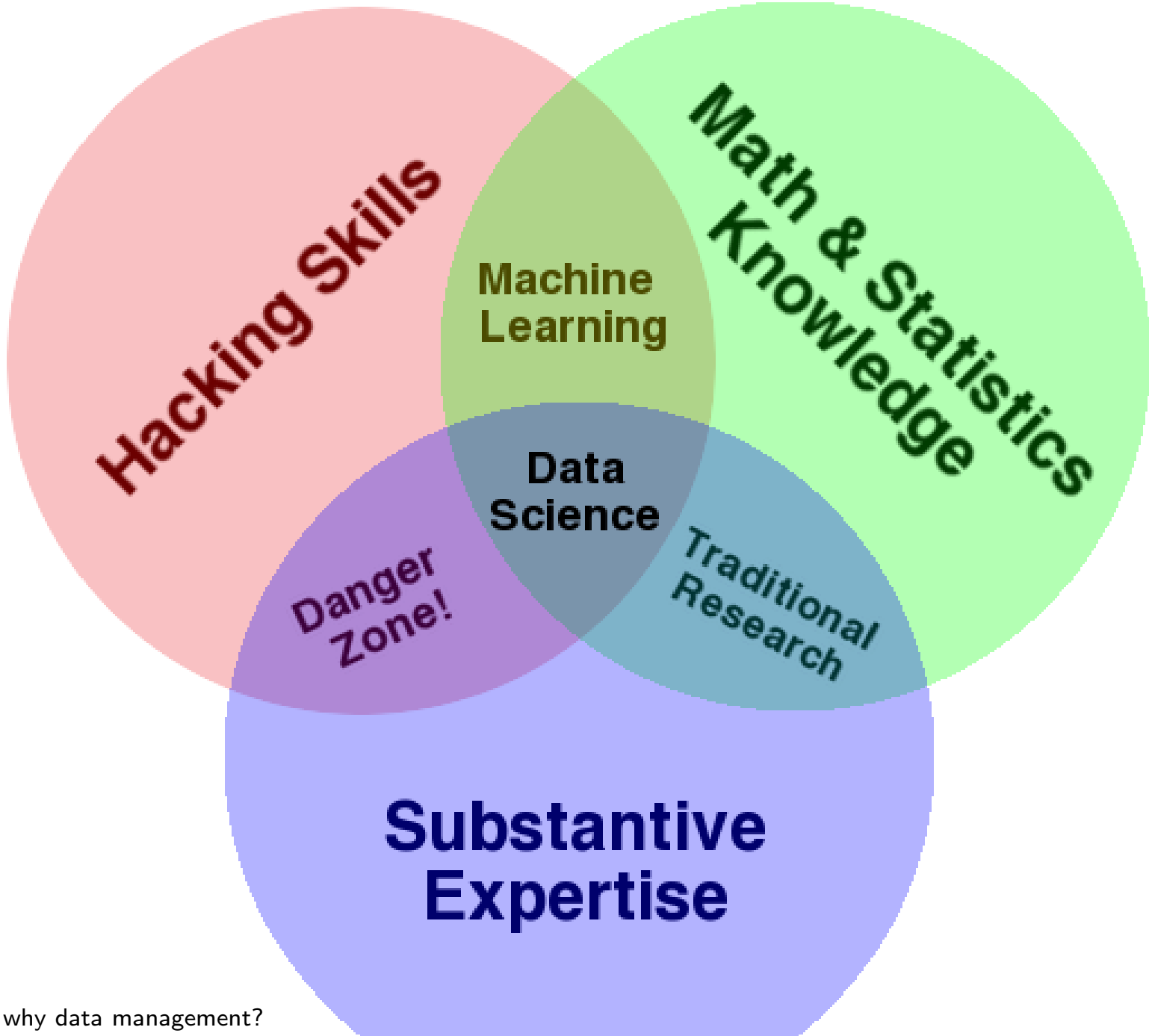
data management is fundamental

- 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!
  - sth you're passionate about
  - sth that will advance your career/think beyond school

data science

- see venn diag next p
- http://gking.harvard.edu/files/LazPenAda09.pdf
- 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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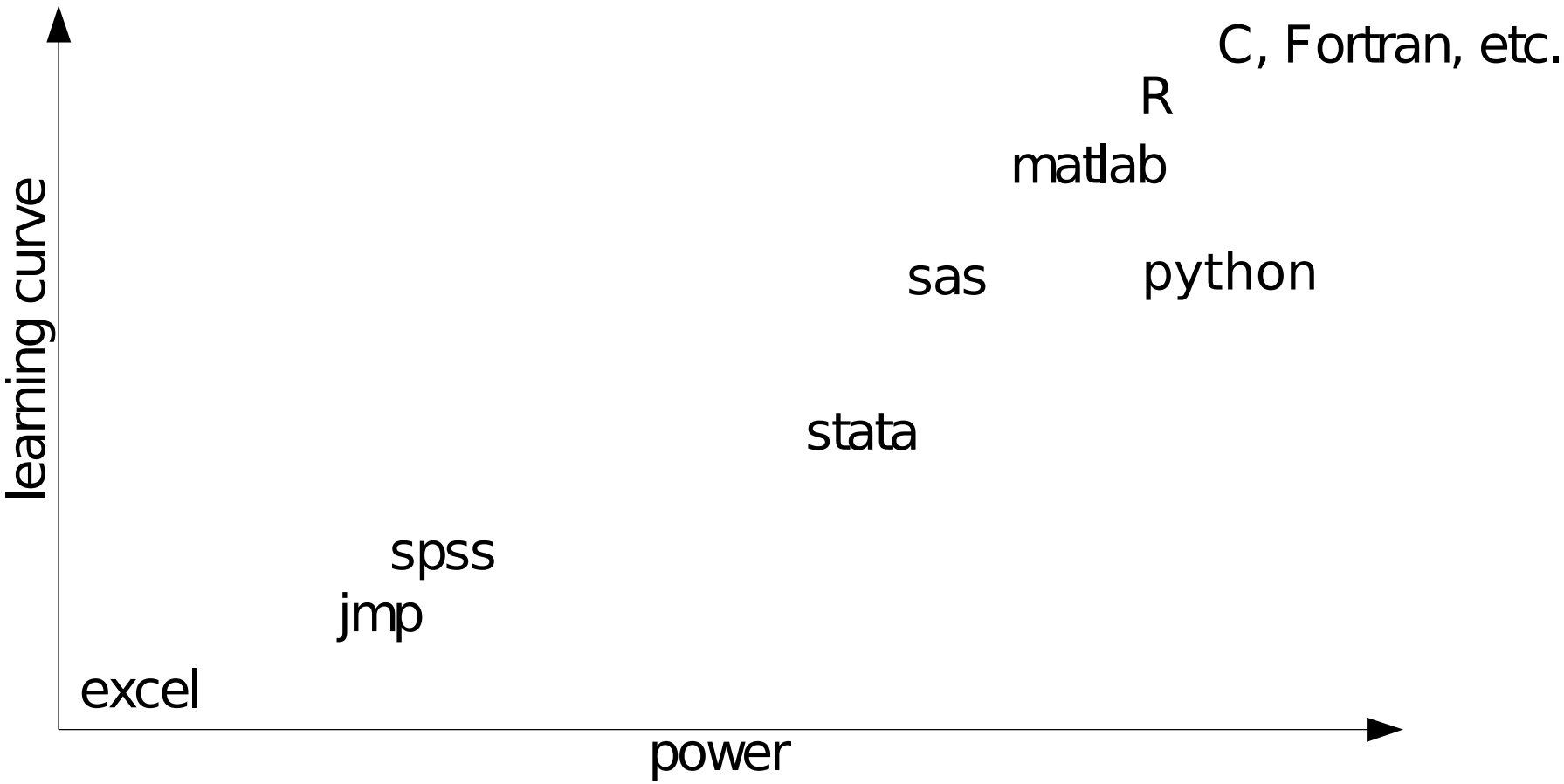
a critical decision!

- takes months to get productive with software
- takes years to master
- excel and spss are junk that no one should use
- sas: a dinosaur (still, often industry standard), very verbose

which one?

- stata: user friendly, fast, very concise code
- r: user unfriendly, slow; weird code! for math people
- py: clean and fun; for IT people

which one?


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

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Python v R v Stata

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data sources

- http://www.worldvaluessurvey.org/
- http://www.norc.uchicago.edu/GSS+Website/
- http://www.icpsr.umich.edu/icpsrweb/ICPSR/
- http://www.thearda.com/
- https://www.pippanorris.com/data

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