Practical Data Science: Wrangling Data and Answering Questions

Nick Eubank

What is Data Science?

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2. What (empirically) is Data Science?

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- Question-first approach
- The tool you use should be dictated by the question you seek to answer

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Over the past several decades:

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1. Availability of data $\uparrow$
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$\Rightarrow$ Huge proliferation and increase in sophistication of computational methods

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$\Rightarrow$ Development of new tools occurred *within* each silo.

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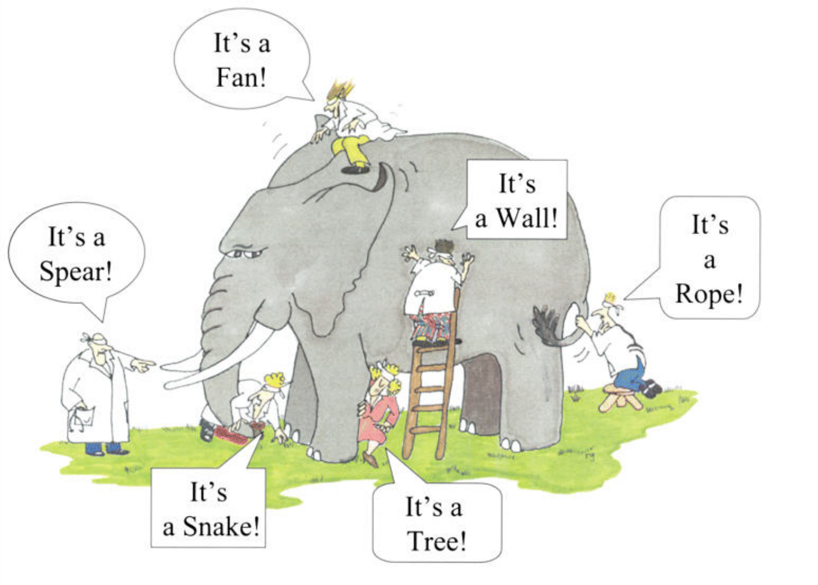
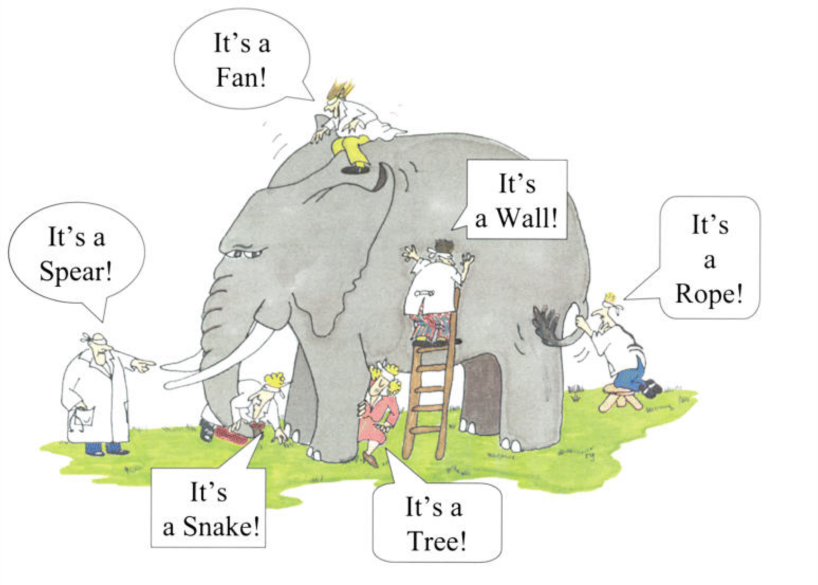
- Each silo has focused on the aspects most relevant to their applications. e.g.:
    - CS likes to classify things and make predictions, don't care how model works
    - Social scientists like to make causal statements, don't care about predictive power



It's a Fan!
It's a Spear!
It's a Wall!
It's a Rope!
It's a Snake!
It's a Tree!



⇒ This is where we are *now*.

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An effort to unify the development of quantitative methods
→ Recognize the elephant

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  - Recognize that your professors' conception of "data science" may not match yours.

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- Important not just technically, but also when it comes to advice.
  - Recognize that your professors' conception of "data science" may not match yours.
  - Also just good life advice: scientists are very unscientific when it comes to career advice!

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Data Analysis DS

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- Drew and Genevieve are *extremely* talented software engineers, and will be providing a rigorous foundation for your future programming endeavors.
- Even if you have programmed before, please be open to what they teach.
    - LOTS of industry experience feeds into their recommendations.
    - Great opportunity to break some bad habits.

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(More detailed memo to follow on Slack)

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You have two editor options for Bootcamp:

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Consider talking to your TAs and older students when deciding.