Online CDS 101 *Introduction to Computational and Data Sciences*

Data transformation

What is data wrangling?

The word "wrangle"

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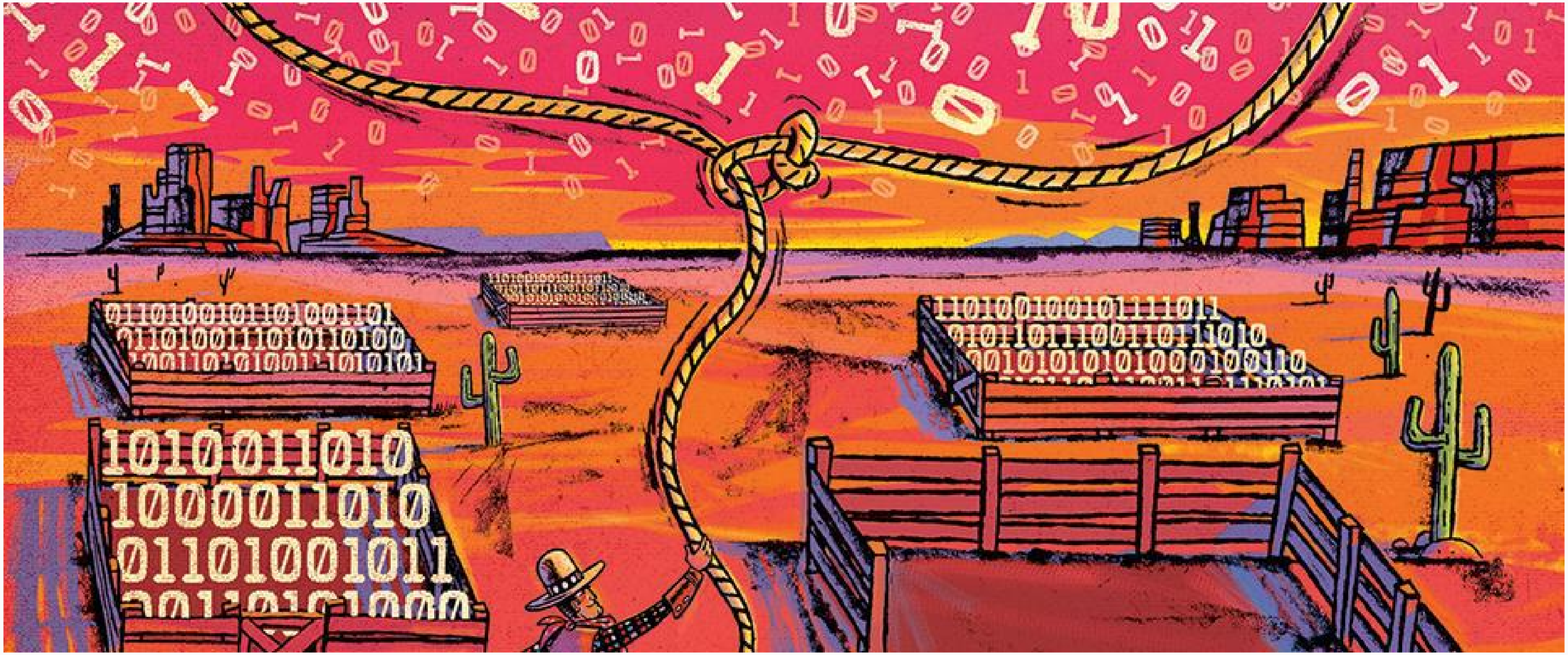
- In practice, data wrangling requires the use of data transformations to accomplish tasks related to processing, structuring, and analysis.

The word "wrangle"



Source: Digital image of a cowboy wrangling data, Digital image on *likelihoodlog.com*, accessed September 20, 2017, www.likelihoodlog.com/?p=1151

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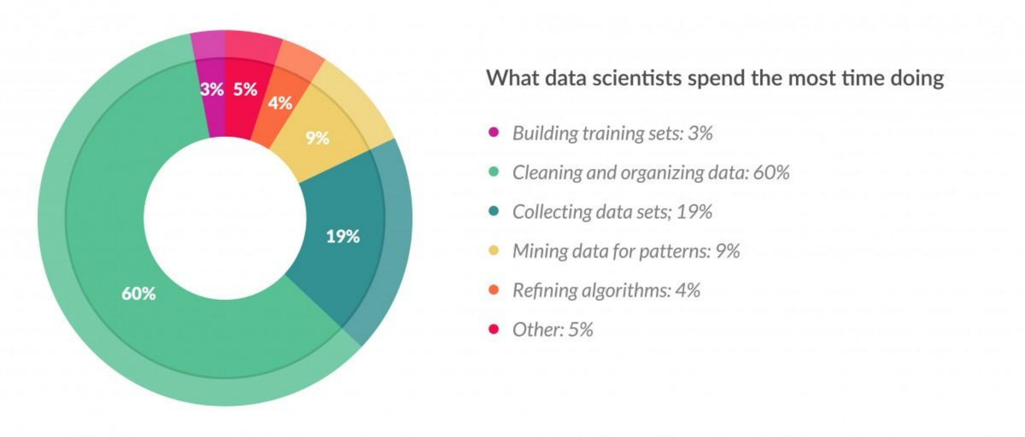
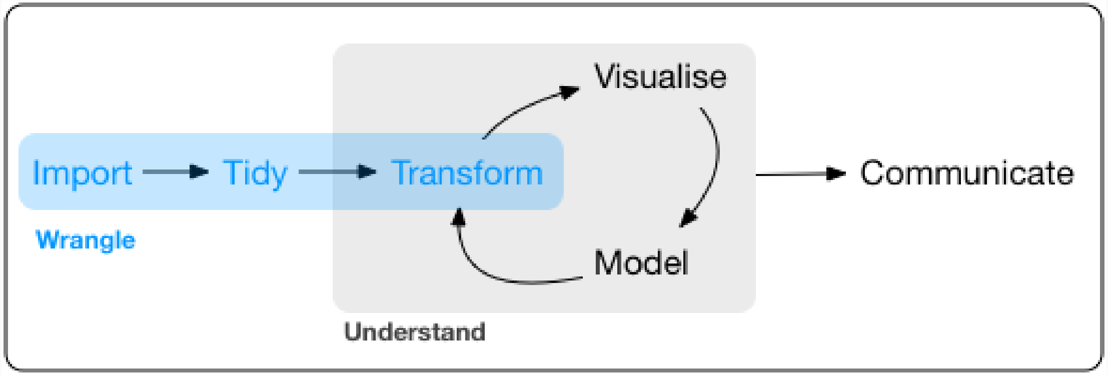
- It would be nice if all datasets were like this! ...but they're the exceptions to the rule
- Most raw datasets need cleaning, and this is where data scientists will spend **most** of their time



Source: Cleaning Big Data: Most Time-Consuming, Least Enjoyable Data Science Task, Survey Says, Digital image on *forbes.com*, accessed September 20, 2017, www.forbes.com/sites/gilpress/2016/03/23/data-preparation-most-time-consuming-least-enjoyable-data-science-task-survey-says/

The "data wrangling" pipeline



Source: Data wrangling pipeline, Digital image on *r4ds.had.co.nz*, accessed September 20, 2017, r4ds.had.co.nz/wrangle-intro.html

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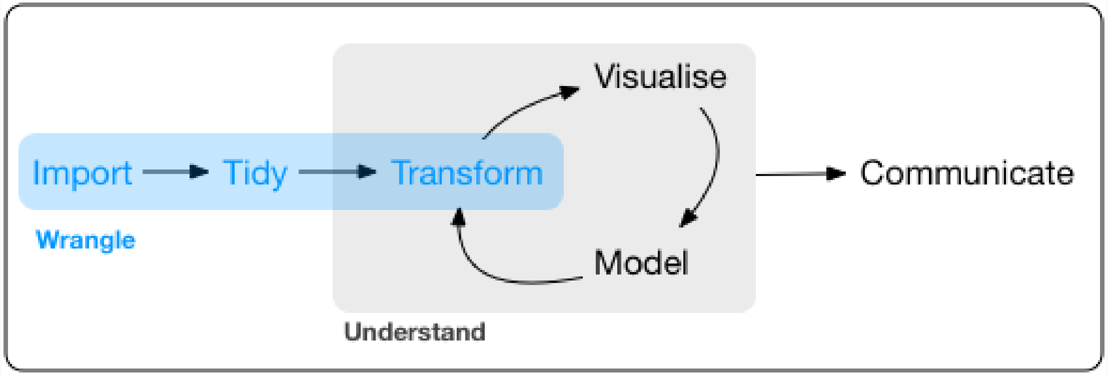

- **import** → obtain data and get it into R

Source: Data wrangling pipeline, Digital image on *r4ds.had.co.nz*, accessed September 20, 2017, r4ds.had.co.nz/wrangle-intro.html

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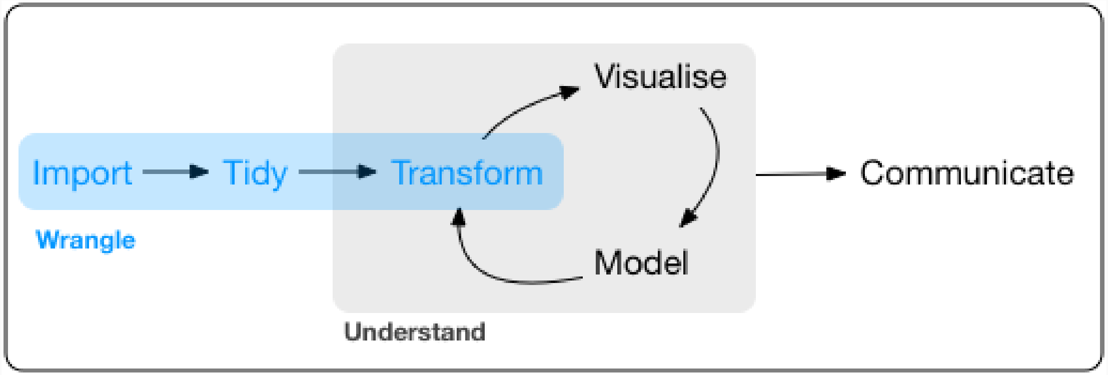

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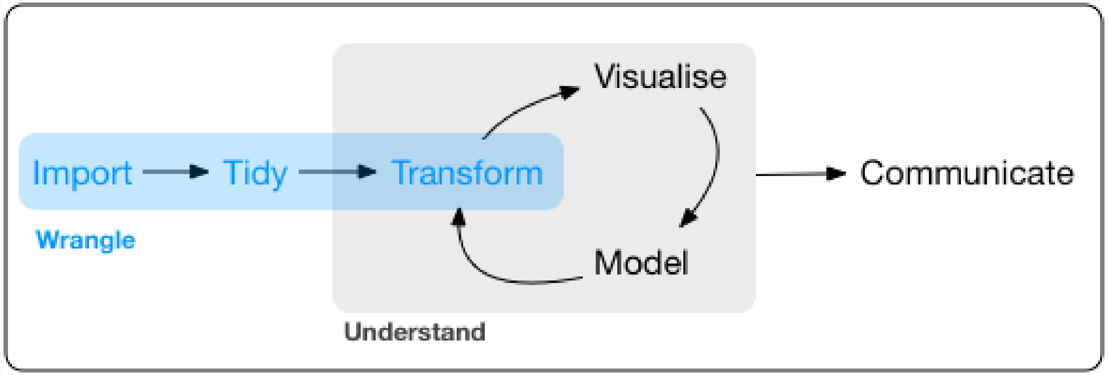

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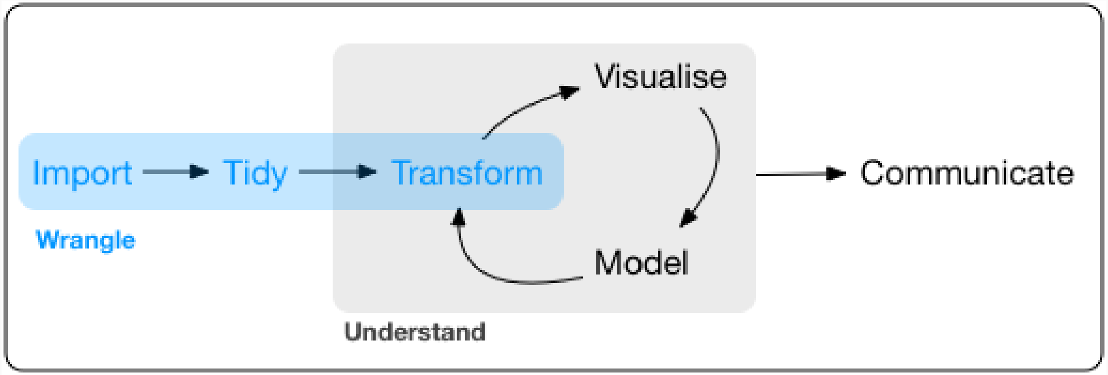

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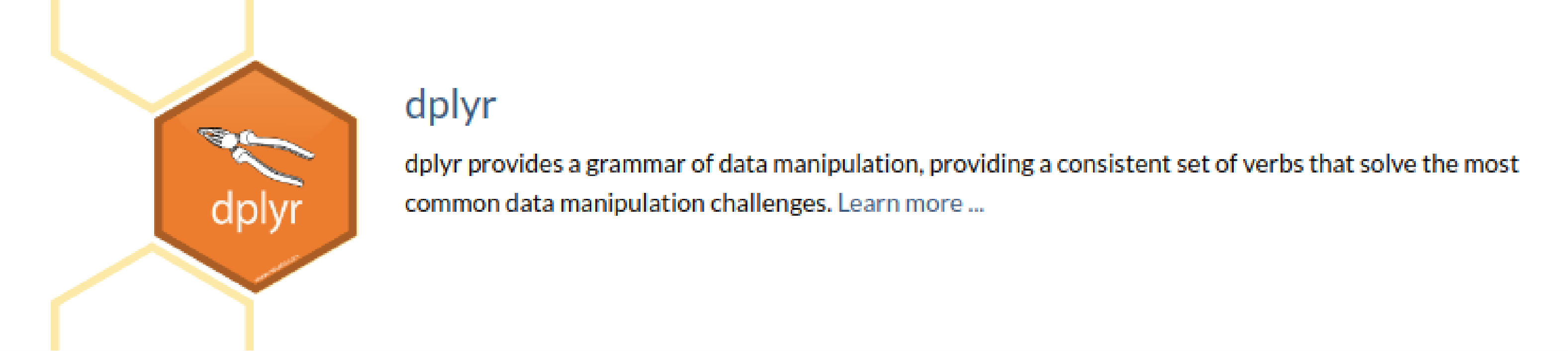
Meet the dplyr package



dplyr

dplyr provides a grammar of data manipulation, providing a consistent set of verbs that solve the most common data manipulation challenges. Learn more ...

Source: dplyr logo with blurb, Digital image on packages page of *tidyverse.org*, accessed on September 27, 2018, www.tidyverse.org/packages/

Credits

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