VERIFY IT FOR YOURSELF

INCORPORATING AN INTERACTIVE DATA EXPERIENCE INTO YOUR CLASS

A PRESENTATION FOR THE 2018 GCP COLLABORATORY

BY JOHN ALESHUNAS

Do not believe something just because it has been passed along and retold for many generations…

Do not believe something just because it is cited in a text…

Do not believe something because the speaker seems trustworthy…

…when you yourselves directly know, "These things are wholesome, blameless, praised by the wise; when adopted and carried out they *lead to well-being, prosperity and happiness*," then you should accept and practice them.“

The Buddha Kalama Sutta

OUTLINE

- The case for an interactive data experience
- Tools for data interaction
- A direct example
- Interacting with Twitter
- Working with data sources
- Available data sources

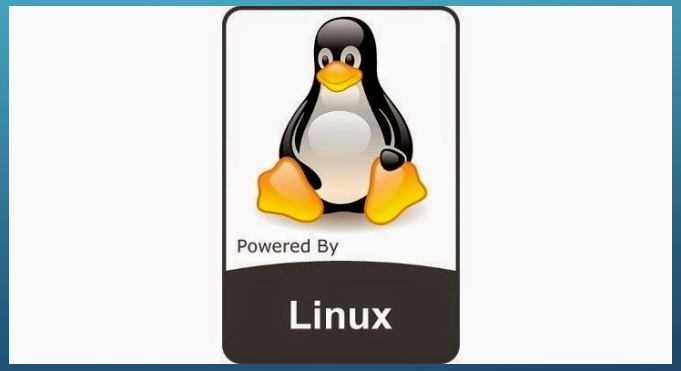
THE CASE FOR AN INTERACTIVE DATA EXPERIENCE

TOOLS FOR DATA INTERACTION

- R is open source and free

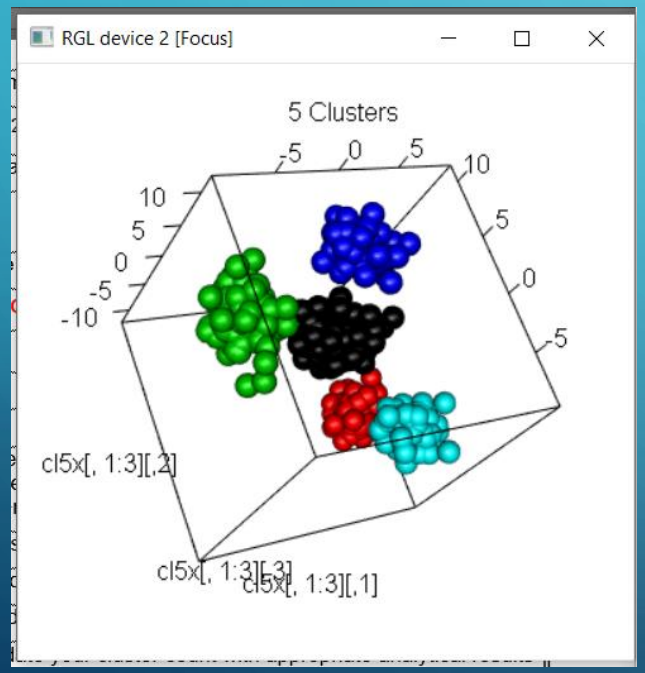
TOOLS FOR DATA INTERACTION

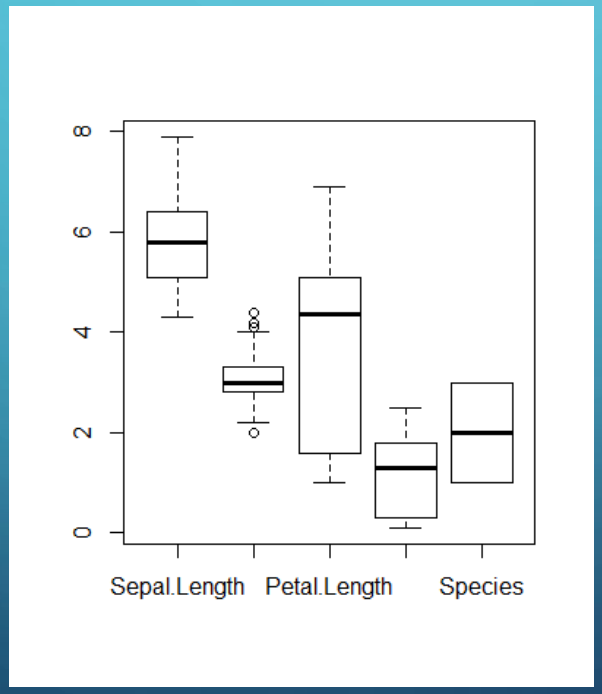
- R is a cross-platform environment

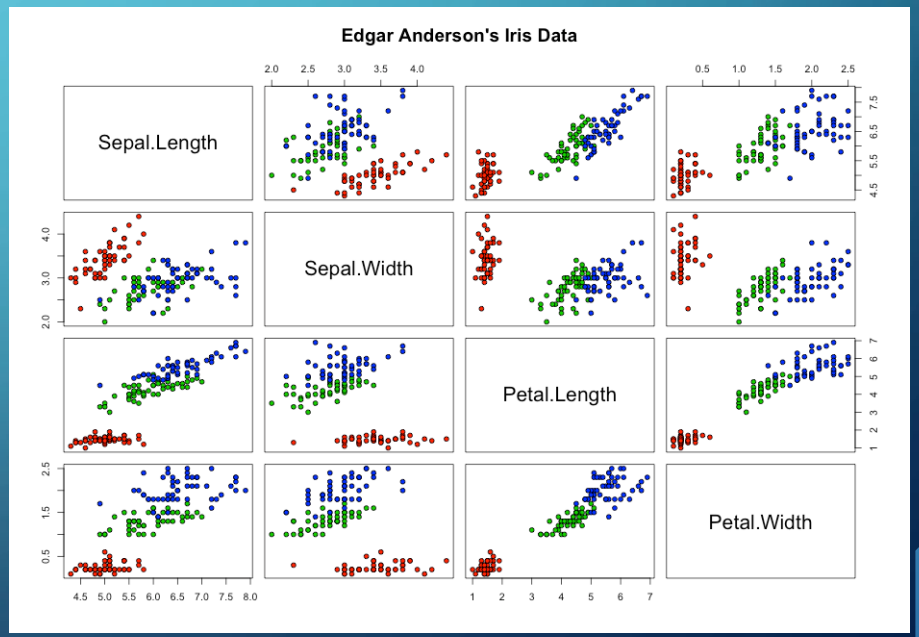


TOOLS FOR DATA INTERACTION

- R Graphics and Visualization





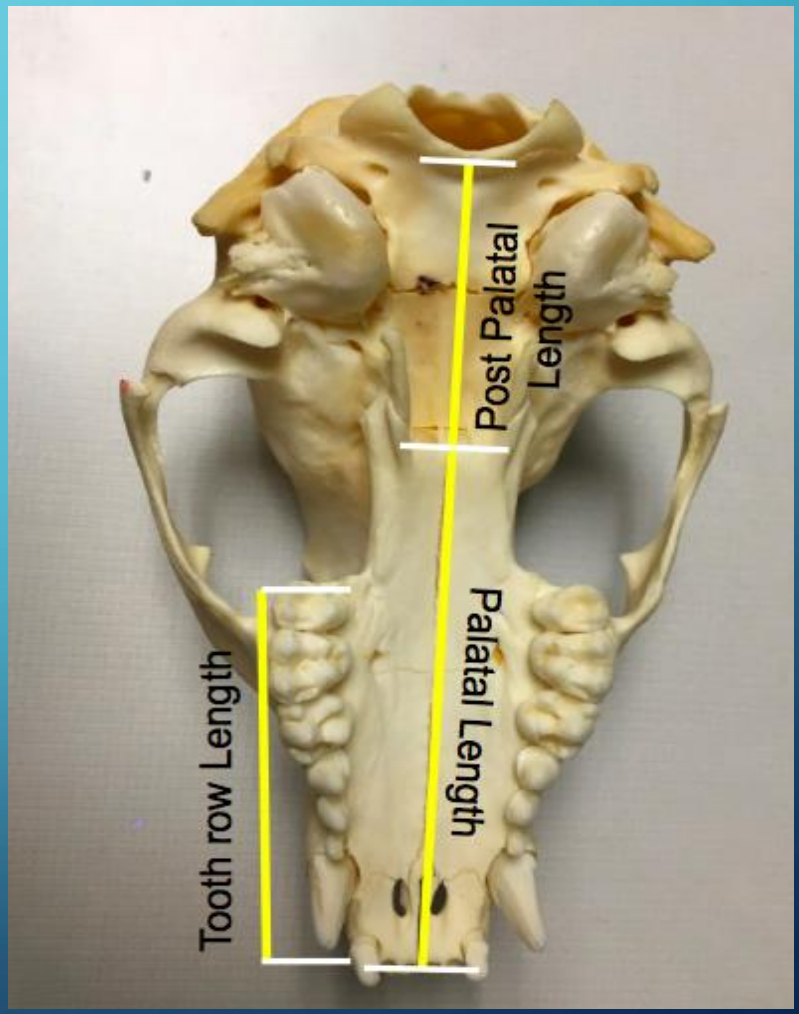


A DIRECT EXAMPLE

- Identifying Animal Species With Craniometrics
- Senior Thesis: Banner, 2014, Kaufman, 2015, Renkins, 2017
- Mentor: Mike Dawson, Saint Louis Zoo

A DIRECT EXAMPLE

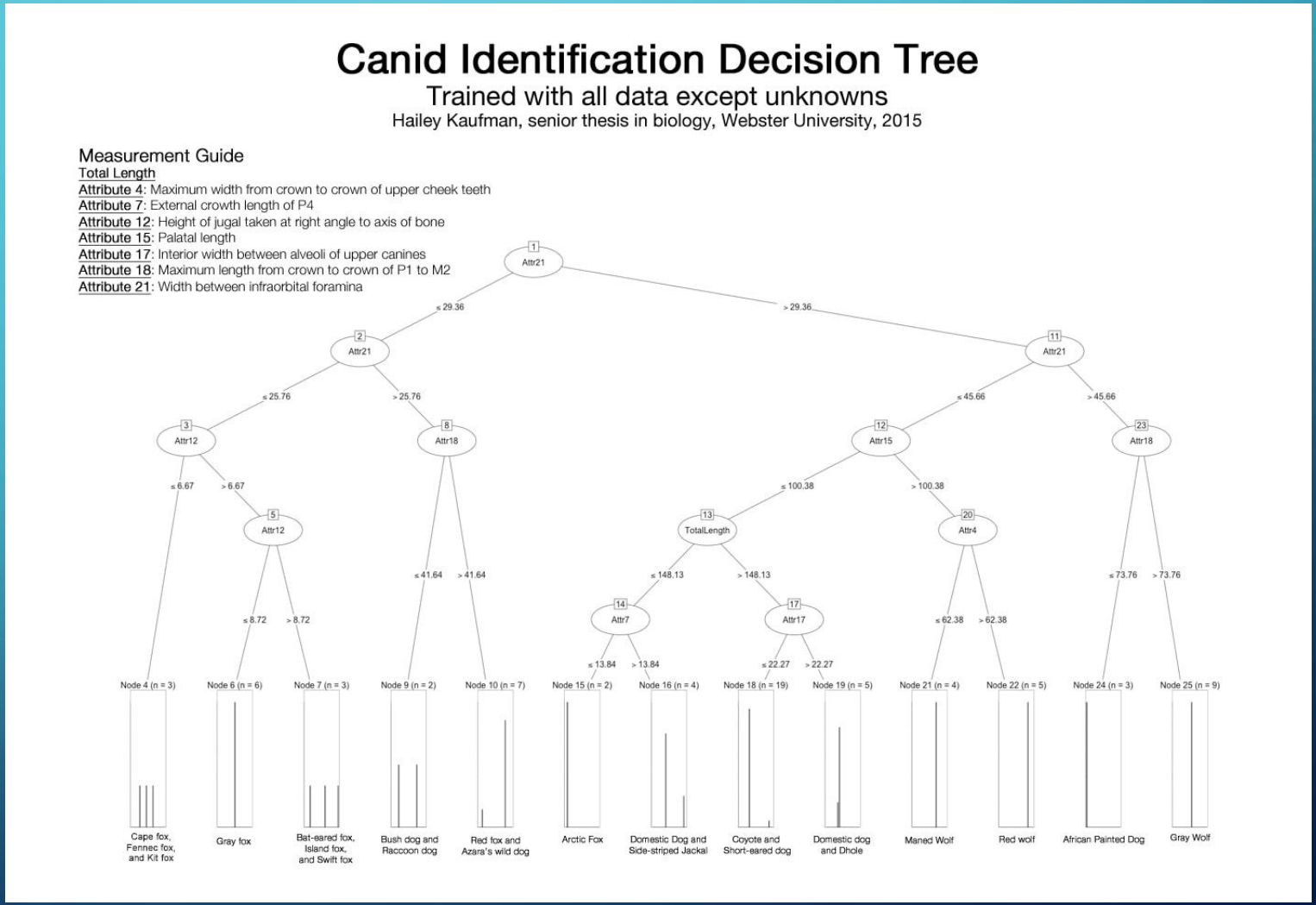
- 19th century technology
  - Labor intensive process
  - Measure
  - Look up reference
  - Verify



A DIRECT EXAMPLE

Hailey Kaufman

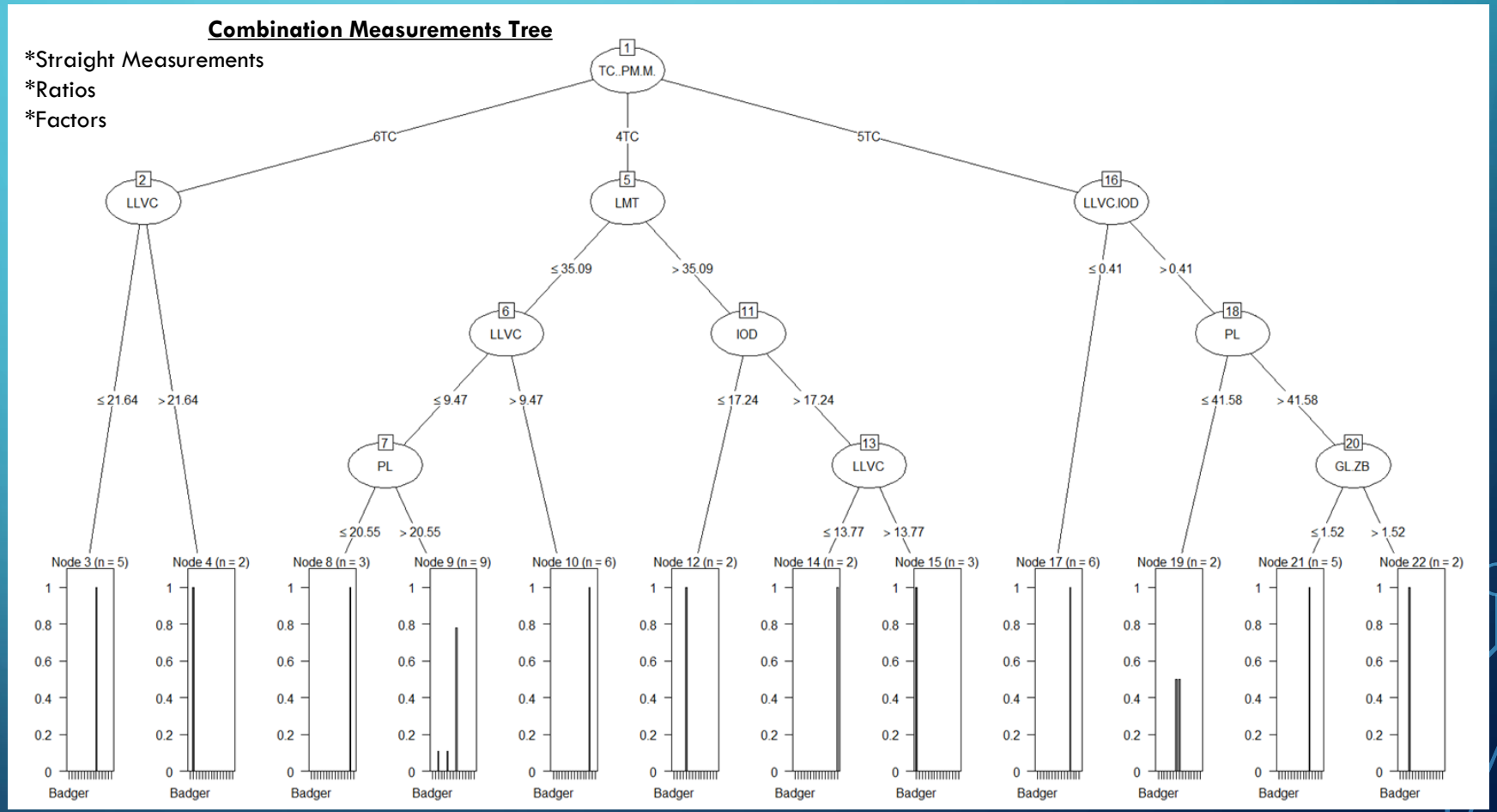
2015



A DIRECT EXAMPLE

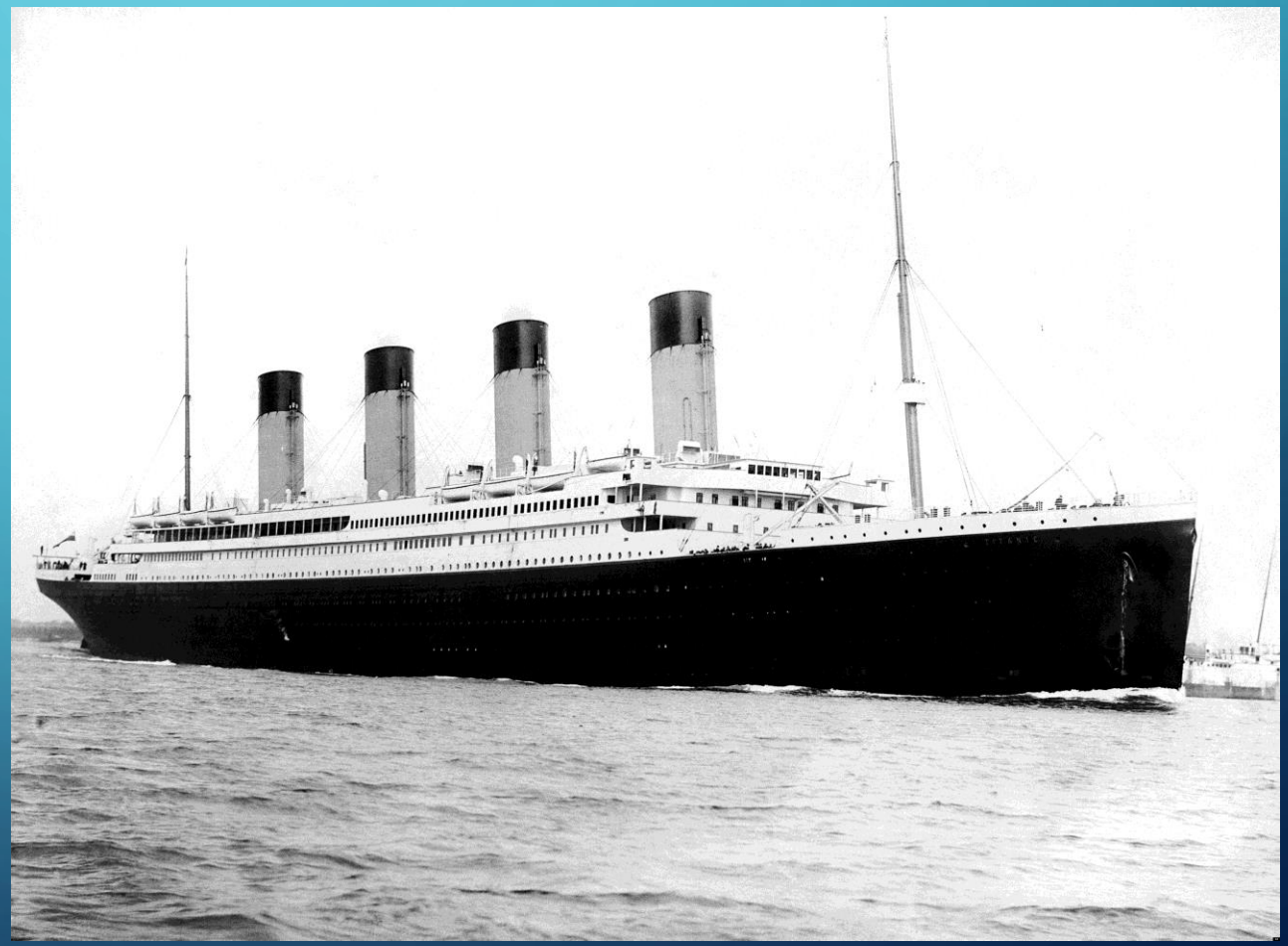
Olivia Renkins

2017



HISTORY AND MACHINE LEARNING

- RMS Titanic
- 2224 passengers and crew
- 710 survivors
- 2201 instances in dataset

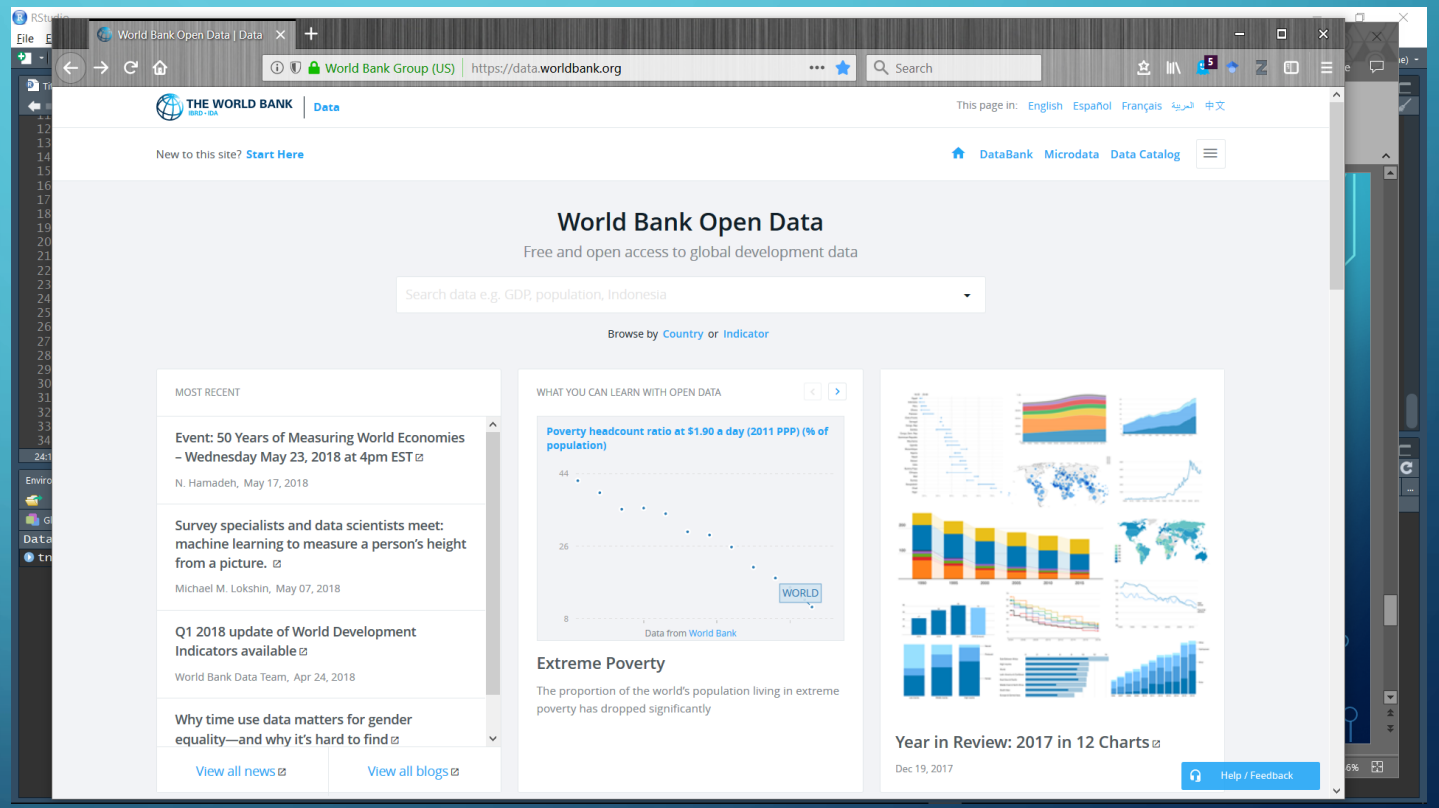


INTERACTING WITH TWITTER

- KEYS 4014 Social Movements and the Impact of Technologies
- 1st topic: Hate groups
- 2nd topic: Jason Stockley trial
- KEYS 4014 online – interactive R script

WORKING WITH DATA SOURCES

- Internet data sources
- World Bank Data



WORKING WITH DATA SOURCES

- Exploring climate change using World Bank data
- Chart data
- Overlay trend models

AVAILABLE DATA SOURCES

- World Bank Data
  - https://data.worldbank.org/
- Saint Louis – City View
  - https://www.cityhealthdashboard.com/mo/st.%20louis/city-view
- Data.gov
  - https://www.data.gov/
- Correlates of War Project
  - http://www.correlatesofwar.org/

SUMMARY

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Everything you encounter is your life

Kosho Uchiyama