

MGMT 228: Analytical Methods

Use the web to find us an example of "statistics" being used in the world to make an argument.

ANY and **ALL** examples welcome.

Justin Leinaweaver (Spring 2022)

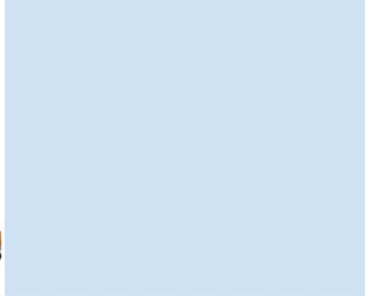
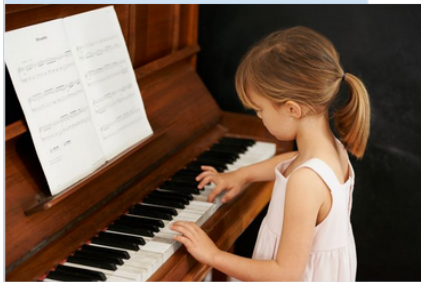
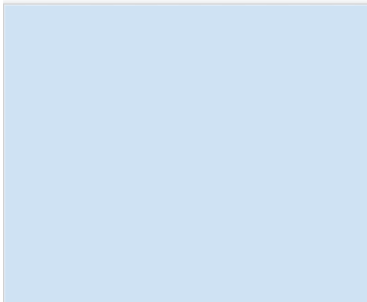
Introductions

- Name
- Year in school
- Major
- Dream job

What is something you learned in intro statistics (MATH 227) that has proved useful in your life?

What is something you learned in
intro statistics (MATH 227)?

Optional: ...that has proved useful
in your life?



Learning Outcomes

By the end of the semester you will be able to:

- 1 Collect and critically evaluate data from a variety of sources (e.g. government sources, surveys, etc.)
- 2 Use basic data analytics tools to support decision-making (e.g. univariate, bivariate and multivariate approaches including regression), and
- 3 Apply a set of more advanced tools that expand the utility of these models (e.g. forecasting, seasonality, nonlinearity, constrained dependent variables, etc.).

Backup your files to the cloud!



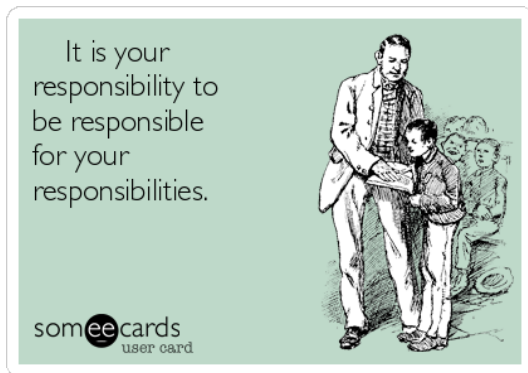
Grade

Participation	25%
Visualizations Report	15%
Simple OLS Report	20%
Multiple OLS Report	20%
Final Report	20%

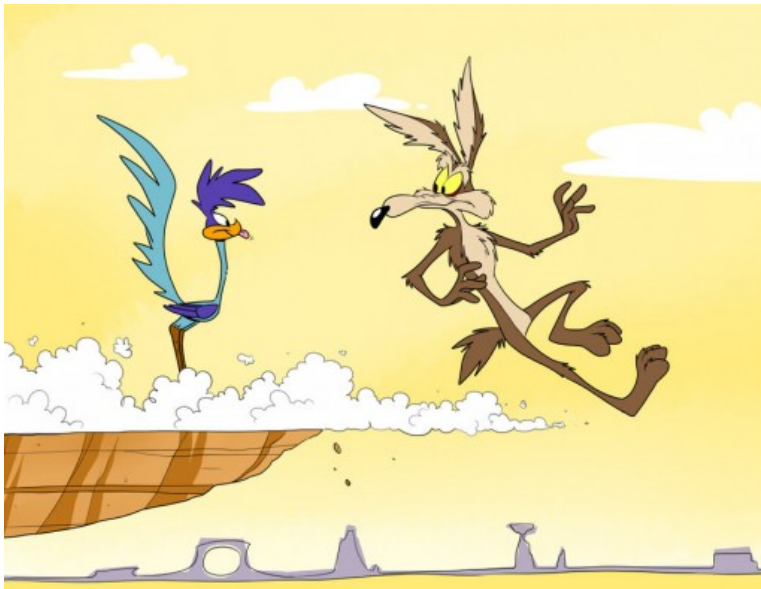
Participation

- Get to class on time,
- Have the materials you need to be productive,
- Do the work in class, and
- Save your work.

Excused absence coming up?



It is your responsibility to notify me and to complete a make-up assignment.



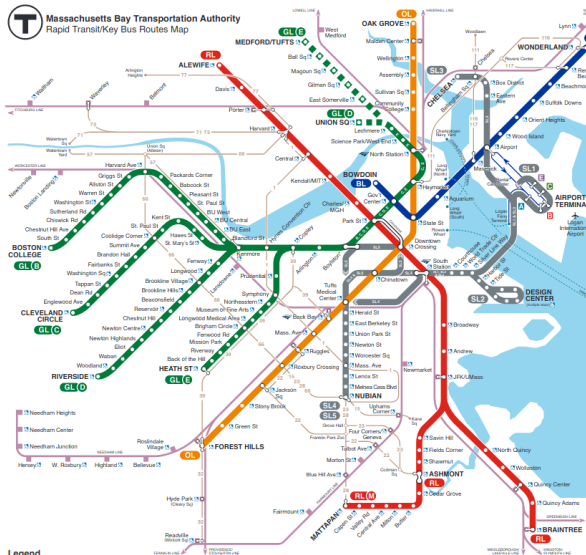
**YEAH, IF YOU COULD KEEP ME IN
THE LOOP**

THAT'D BE GREAT

memegenerator.net

What is a model?

The Boston "T"



T Rapid Transit and Key Bus Routes

MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
MBTA.COM



Legend

- Blue Line
- Green Line and its branches
- Orange Line
- Red Line
- Silver Line (Bus Rapid Transit)
- Commuter Rail
- Key Bus Routes (Frequent Service)
- Transfer station
- Subway transfer station to bus/commuter rail

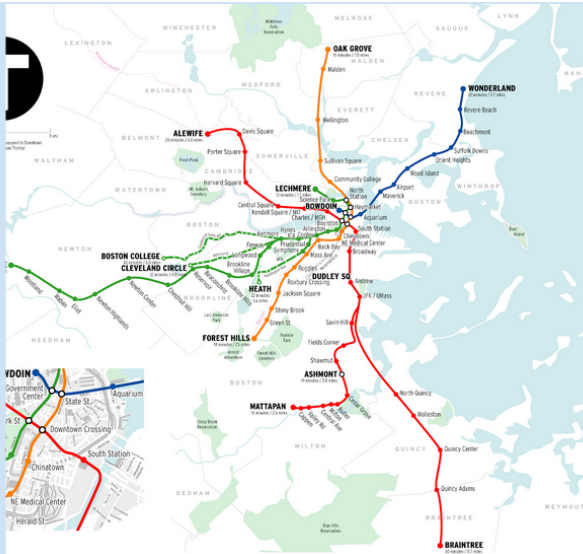
Accessibility

- All bus, ferry services, not marked commuter rail and subway stations are accessible
- Not accessible station

Customer Service and Travel Information

- 817-222-3300
- 800-285-4100
- 817-222-5146 TTY
- Website: www.mbta.com
- MBTA Transit Police: 817-222-1312, 817-222-1360 TTY
- Elevator, escalator and lift updates: 800-282-6100

Map © MBTA/Google, 2015. MBTA/Google, 2015. MBTA/Google, 2015.





Maps are:

- Neither true nor false
- Limited in their accuracy
- Partial representations
- Useful for only some uses
- A reflection of the interests of the designer



Scientific models are:

- Neither true nor false
- Limited in their accuracy
- Partial representations
- Useful for only some uses
- A reflection of the interests of the designer

Our Plan This Semester

Build models to answer questions with data

- What drives economic investment in US states?
- Why do some countries attract greater levels of international investment than others?
- What explains why some individuals make more money than others?