

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)

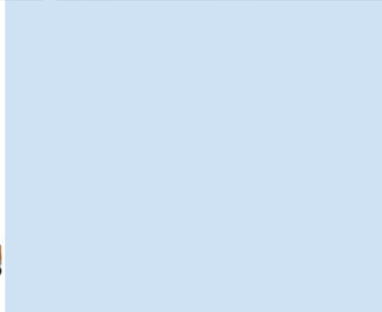
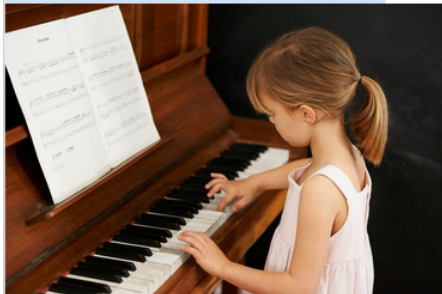
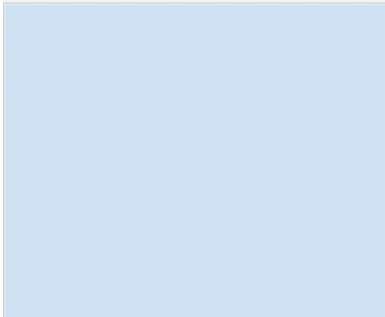
Introductions

- 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
be responsible
for your
responsibilities.



som^{ee}cards
user card

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

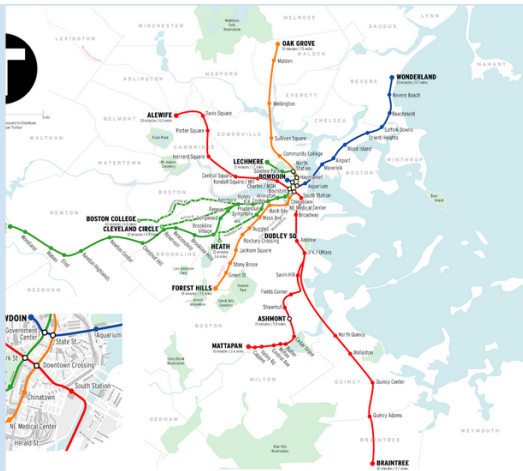
memegenerator.net

What is a model?

The Boston "T"



Ⓓ



Rapid Transit and Key Bus Routes

MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
MBTA.COM



- Legend**
- Blue Line
 - Orange Line and its branches
 - Metropolitan High Speed Line
 - Green Line
 - Red Line
 - Blue Line (Blue Rapid Transit)
 - Transfer station
 - Subway transfer station
 - Commuter Rail
 - Key Bus Routes (Frequent Service)
 - Commuter Ferry Route
 - MBTA Service
- Accessibility**
- All bus, ferry services, and all marked commuter rail and subway stations are accessible.
 - Not accessible station
- Customer Service and Travel Information**
- All bus, ferry services, and all marked commuter rail and subway stations are accessible.
 - 617-522-3200
 - 617-522-6100
 - 617-522-3146 TTY
 - Website: www.mbta.com
 - MBTA Transit Police: 617-522-1000
 - 617-522-1000 TTY
 - Elevators, escalators, and lift systems: 617-522-6100

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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?

For Thursday

If you were starting a new business in the US where specifically would you do it?

Come to class ready to **make an argument** and provide a piece of **evidence** to support it.