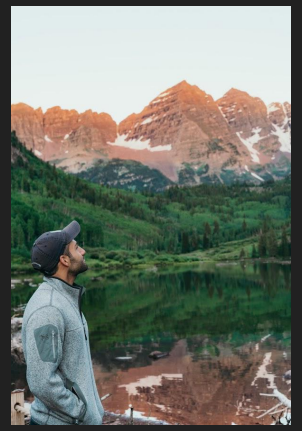
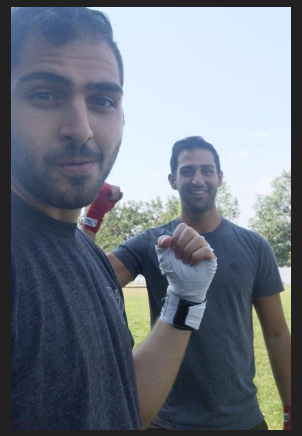
STAT 2600: Introduction to Data Science
Week 1 Recitation

TA: Kayvon Coffey

A little about me

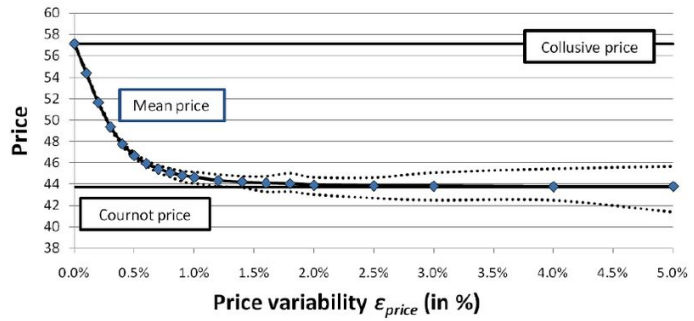

Assume that a decision maker is investing $1000 and is choosing between two stocks with the following appreciation estimates and a broker's best estimate of the probability of that appreciation: Stock A ($10 000, .3) and Stock B ($6000, .5). Also assume that the emotional response to both options is positive. Let the emotional reaction to stock A $e(A) = .35$, and let the emotional reaction to Stock B $e(B) = .25$, inserting these values into Equations (4) and (5) produce

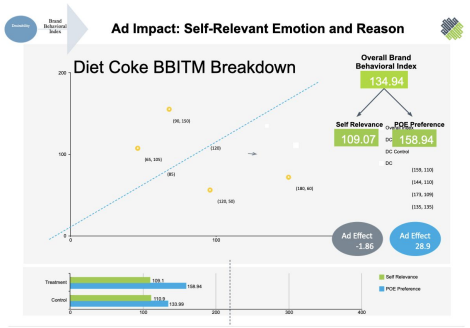
$$\beta_1 = .5 + \frac{.35 - .25}{\text{sum}\{|.35|, |.25|\}}[.5] = .5 + \frac{.1}{.6}[.5] = .5 + .08 = .58$$

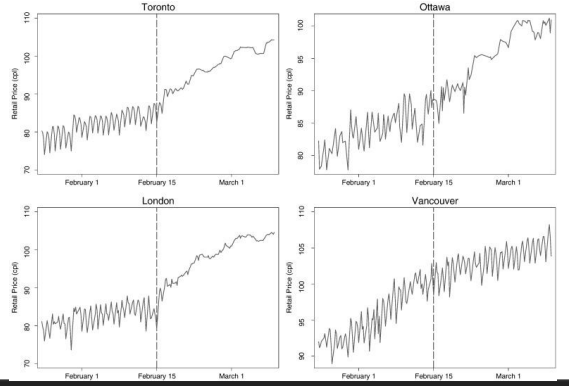
$$\beta_2 = .1 - .58 = .42$$

Inserting these weights into Equation (3) produces a preference for option A:

$$d^* = \left\{\beta_1\left[\frac{a-b}{\max\{|a|,|b|\}}\right]\right\} - \left\{\beta_2\left[\frac{p-q}{\max\{|p|,q|\}}\right]\right\} = \left\{.58\left[\frac{|10\,000 - 6000|}{10.000}\right]\right\} - \left\{.42\left[\frac{|.5-.3|}{.5}\right]\right\}$$
$$= .58(.4) - .41(.4) = .23 - .17 = .06$$







Kayvon Coffey

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Office Hours: Thursdays 1:00pm - 3:00pm

- APPM PmD student
- Where you're from: Boulder, CO!
- Where you went to school: Dartmouth College
- Previous jobs: Behavioral Science, Economic Consulting
- Research Interests: Medical Tech
- Extra Curricular Interests: Playing violin, listening to Reggae music, Hiking, Skiing, Hockey (go Avs), Boxing, Reading (Sci-Fi, Fantasy). Cooking, Brewing Beer,

A little about you...

- Name, pronouns
- Hometown, major, hobbies
- Why are you interested in Data Science?

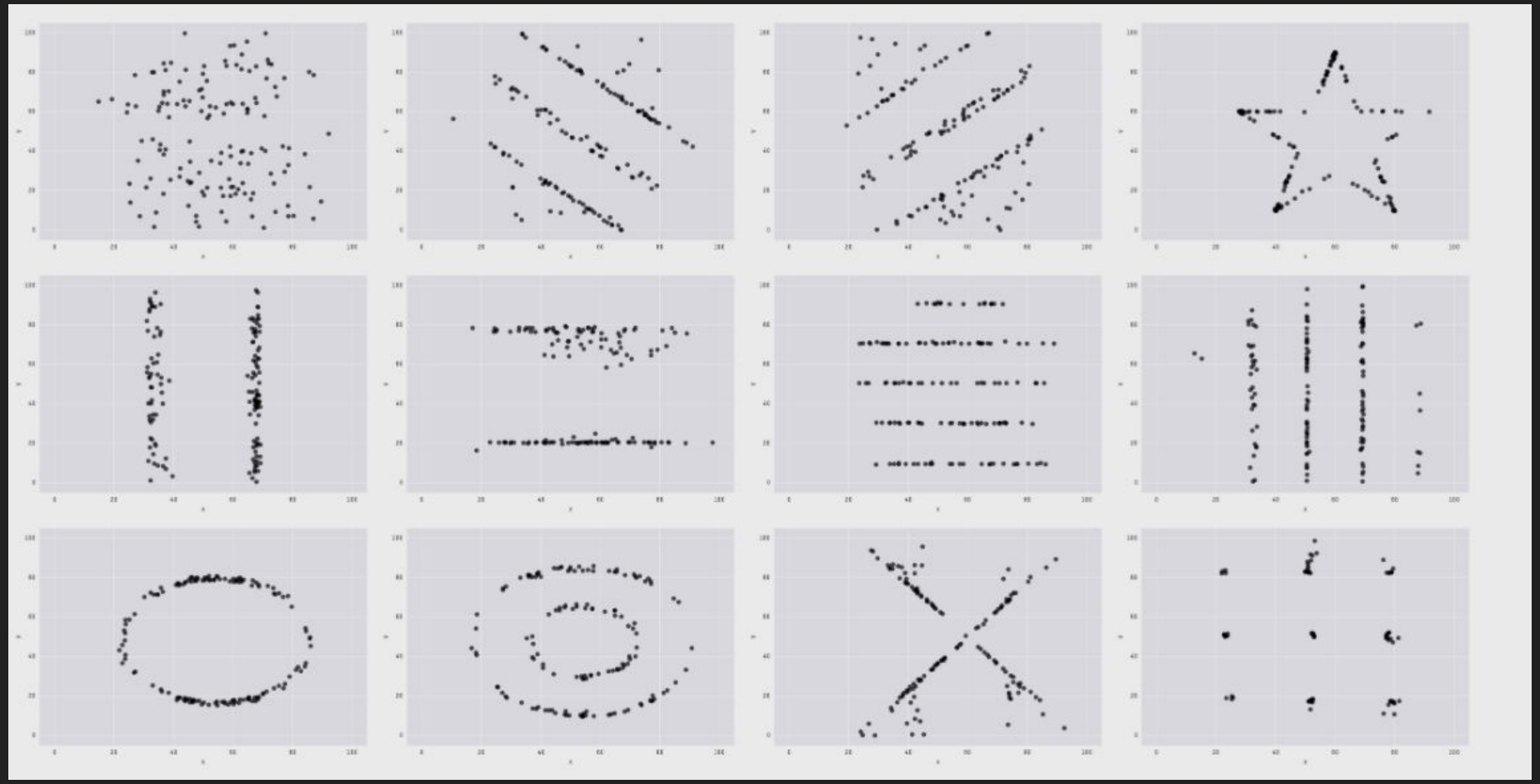
Quick Poll: Statistics are Objective Right?

Common summary statistics

Measures of central tendency
- Mean
- Median
- Mode

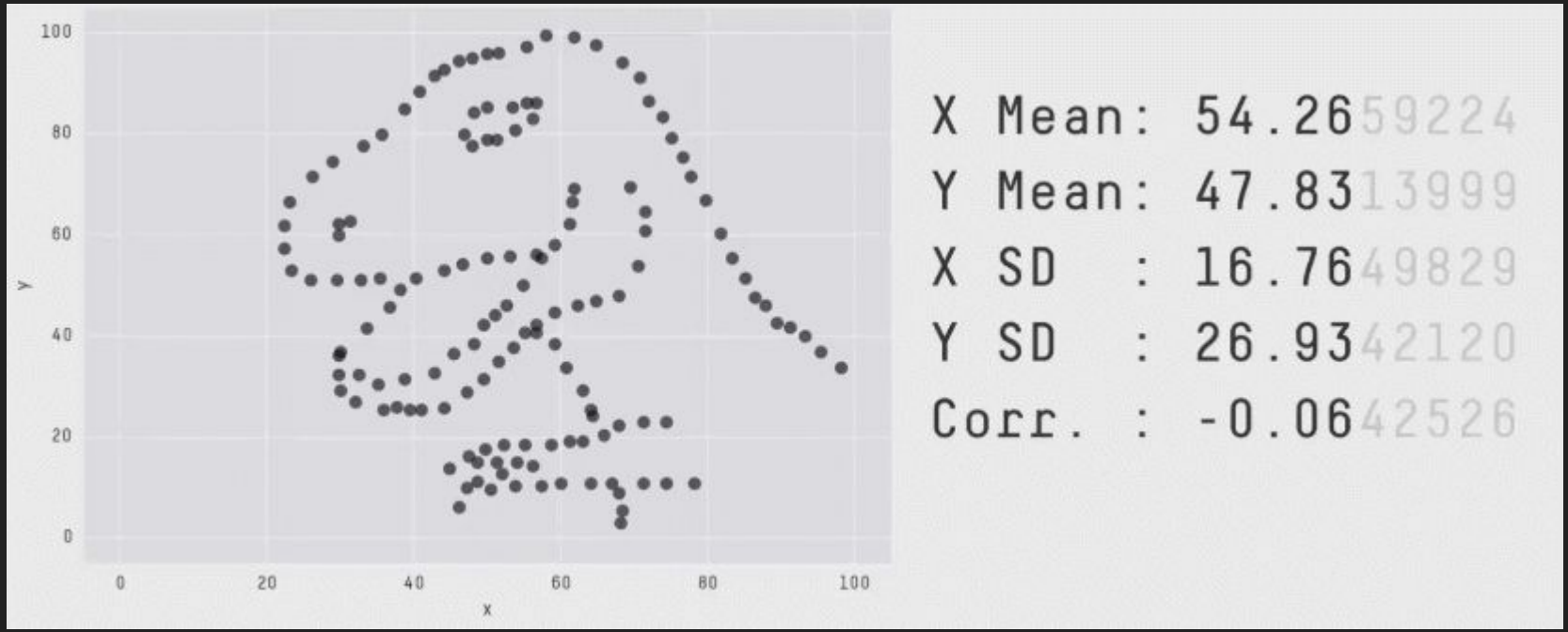
Measures of “spread”
- Range
- Percentiles
- Variance

Do summary values tell the whole story of a dataset?



Source: Justin Matejka, George Fitzmaurice at AutoDesk Research (link).

The Datasaurus Dozen



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Agenda

- Establish classroom norms and expectations
- Technology we will be using this term
- Recitation plan - what to expect in recitation
- Practice problems

Classroom Norms and Expectations

Expectations

- Show up on time, don’t leave early
- Video on, mic off unless speaking, participate
- Clean video and audio backgrounds. Clothing Required
- The chat is a professional environment

- I will try to respond to emails quickly during the week, I will respond once on the weekends
- I will try to return assignments within 3-5 days

Norms

-

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Norms

- Give everyone the benefit of the doubt
- Listen until someone is finished talking
- Lack of respect includes eye-rolling, talking over someone, name calling
- Respect pronouns
- Fumble Forward

Recitation Plan

Time for questions at the beginning - from lecture, homeworks, in general

Worked practice problems

Quiz each week - mostly for attendance / participation / review

Practice Problems

Instructions

- Follow the link to the Limnu board http://go.limnu.com/toucan-high
- Navigate to the pin corresponding to your breakout room
- There are two practice problems. Read the prompts and discuss.
- Record your observations and ideas on the board.

The goal here is not necessarily to come up with numerically correct answers to the questions, but more to notice the way you approach problems in statistics and data science.

After discussing and recording your thoughts on the board, we will come back to the main room and discuss the questions together. Be prepared to contribute.

Conclusions

Question 1

Question 2