




# STAT 2507

Lab 03

October 1<sup>st</sup>, 2019



# Contact Information

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## Labs:

Section C1 (Alia Alkhathami):

Tuesdays 2:35-3:25, HP 4385

Section B6 (Tanvir Quadir):

Tuesdays 3:35-4:25, HP 4385

## Office Hours:

Section C1 (Alia Alkhathami):

Tuesdays / Thursdays 12-1, HP 4260

Section B6 (Tanvir Quadir):

Wednesdays 6-7, HP 4220

# Math Tutorial Centre

- The math tutorial centre (MTC) opens on Friday, September 20<sup>th</sup>, and runs until Friday, December 6<sup>th</sup>
- Google “Carleton Math Tutorial Centre” to see full schedule (look for “P” and “S”)
- Mondays: 11-12:30 and 1-3
- Tuesdays: 10-3
- Wednesdays: 10-12:30 and 1-3
- Thursdays: 10-4
- Fridays: 11-3

# Questions, Comments, Concerns

- If at any point during the semester you have any comments regarding the labs specifically, please feel free to use the following (anonymous, unless you choose to include your name):

<https://forms.gle/YGvrNr7ePeVv8YR19>

I will get an email to my phone whenever a response is submitted – feedback will be seen and taken into consideration promptly

- Examples of helpful feedback:
  - *Moving too quickly or too slowly*
  - *Talking too quickly or too slowly*
  - *Talking too quietly or too loudly*
  - *Font is too small or too big*

# Today's Lab

- Question 1 on assignment 2
- Time to work on remainder of assignment individually, feel free to ask questions

# Describing a Scatter Plot

- Straight line, curved, random?
- Strong, moderate, or weak relationship?
- Are there any unusual observations?

# Interpreting the Correlation Coefficient

- Sample correlation coefficient:  $r$
- Population correlation coefficient:  $\rho$
- Value of  $r$  close to 0  $\rightarrow$  weak relationship / random scattering of points
- Value of  $r$  close to 1  $\rightarrow$  strong positive linear relationship
- Value of  $r$  close to -1  $\rightarrow$  strong negative linear relationship
- When  $r = 1$  or  $r = -1$ , all points lie exactly on a positive or negative straight line, respectively
- If the sample correlation coefficient is close to 0, we should not use the least squares regression line for prediction, as the relationship is weak.