Introduction and Chapter 2 Review

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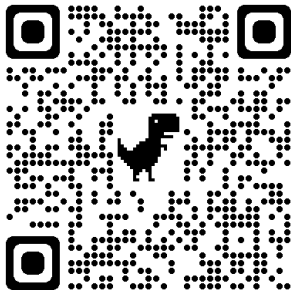
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QR code

Please scan this QR code if you want this slides and worksheet on your phone:

You can also use the link in the Blackboard

Or go to fredazizi.github.io/Teaching

Who am I?

My name: Fred Azizi

My pronouns: He/him/his

I am a PhD student in the Department of Statistics.

Office hours: By appointment (Online)

What are we going to do here?

Structure of the class

- Q/A- Working on worksheet in class
- Roughly, this is how the class time will be divided into:
    - ~10 to 20 min: Q/A about the material/Review slides.
    - ~ 30 to 40 min: Work on the new worksheet.
- Review sessions for exams

Questions:

1- How is this class going to affect my grade?

2- Is attendance required?

3- How do I get the slides/worksheets?

4- Will you provide the solutions?

5- Any tips for success in this class?

Types of Data (or scales of measurement):

- **Nominal Data:** also called qualitative. labels- names (non-numeric label or numeric code)- categories- No meaningful order to them.

- **Ordinal Data:** are also qualitative. similar to Nominal type with a difference that categories have an order, a ranking in it's nature.

- **Interval Data:** also called quantitative, always numeric, between values is fixed number, addition and subtraction are meaningful, don't contain a meaningful zero, can be negative.

- **Ratio Data:** also called quantitative, similar to interval data but with the difference that scale must contain a meaningful zero, can't be negative. **Note:** Your textbook doesn't cover Ratio data. It names all type of quantitative data as interval data!!!

A frequency distribution is a tabular way of summarizing data. Table shows the number of data observations that fall into specific class of intervals/categories.

- Class: a category in a frequency distribution.
- Frequency: number of observation in each class.
- Relative frequency: proportion of observation in each class. It is equal to $\frac{\text{Class frequency}}{\text{total frequency}}$.
- Percent frequency: is the relative frequency multiplied by 100.
- Cumulative relative frequency: proportion of observations that are less than or equal to the class, or accumulated proportion.

How to describe the relationship between **Nominal** variables? $\Rightarrow$ cross-classification table (also called a cross-tabulation table)

Example (2 by 2):

	Cat A1	Cat A2	Total
Cat B1			
Cat B2			
Total			