

# STATISTICS BASICS

## Data Types & Patterns & Graphs

**EXERCISE 1.** At what level are each of the following variables operationalized?  
Numerical (*Continuous/Discrete*) or Categorical (*Nominal/Ordinal*)

	Variable Name	Value Labels	Data Type
1	Age	1, 2, 3, ....	<i>Continuous</i>
2	Sex	male, female, other	Nominal
3	Class standing	freshman, sophomore, junior, senior	Ordinal
4	Marital Status	married, single, divorced, widowed	Nominal
5	Median Household Income	annual household income in dollars	Continuous
6	How much do you like the food on campus?	a lot, some, a little, other	Nominal
7	The number of toxic waste sites in your community	0, 1, 2, 3, ....	Discrete
8	The number of toxic waste sites in your community	0, 1–5, 6–10, 11+	Ordinal
9	Your GPA	below average, average, above average	Ordinal

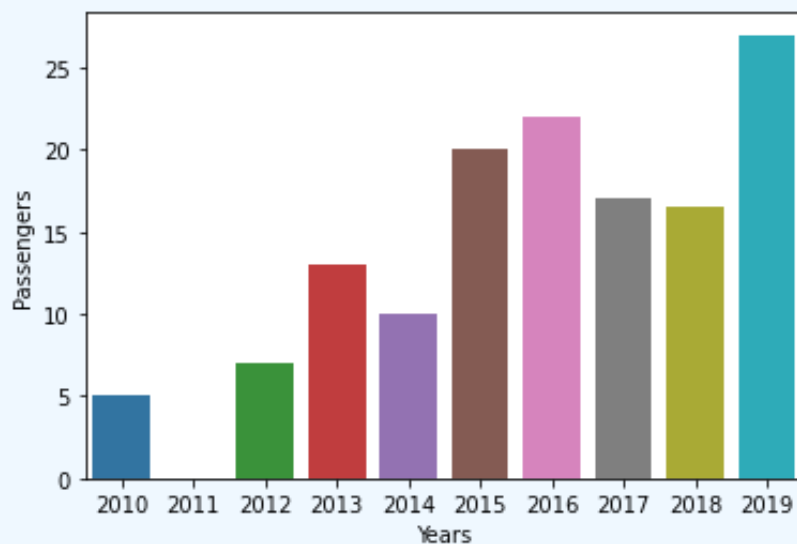
**EXERCISE 2.** Go to the National Opinion Research Center's 2008 General Social Survey Codebook at <http://sda.berkeley.edu/D3/GSS08/Doc/gss08.htm> (Alphabetical Variable List). What are the types of data for the following variables?

Variable Name	Data Type	Variable Name	Data Type
ABLEGAL	<i>Ordinal</i>	MUSICALS	Ordinal
ACTLIT	Nominal	NATBORN	Nominal
ADULTS	Discrete	NUMKIDS	Discrete
AGE	Continuous	PAINCURE	Ordinal
BIBLE	Nominal	POLVIEWS	Ordinal
BLKZONE	Ordinal	RACE	Nominal
CARSGEN	Ordinal	SEX	Nominal
CONROCK	Ordinal	TRUST	Nominal

---

**EXERCISE 3.** The number of passengers of an airline company by years is given in the table below. Create a bar chart based on these data.

Years	2010	2012	2013	2014	2015	2016	2017	2018	2019
Number of passengers (x1000)	5	7	13	10	20	22	17	16.5	27



**EXERCISE 4.** Create a frequency histogram from the data in the table below. What can you conclude about the shape of the distribution?

Income (In thousands of dollars)	Number of families
16-22	2
23-29	3
30-36	5
37-43	8
44-50	8
51-57	10

