Lesson 2 - Preliminaries

Objectives: 1. Visualize/Describe important aspects (shape, center, variability, and unusual observations) of categorical and quantitative variables

2. Understand how simulation helps us make decisions involving a random process.

Topics/Agenda

1. Introduce Project
2. Exploring data (shape, size, ...)
3. Random Processes (Monty Hall problem)
4. Basic R skills
5. Redfin R exercise

Project - Brief introduction
- Think about topics - Pair up next class

Exploring Data (P.2)

1. Shape - is distribution symmetric, where is it centered, and how many peaks are there.

2. Center - where is the distribution centered on? What is a typical value?

3. Variability - How spread out or concentrated is the data?
We often report this variation through standard deviation.

Book definition: sd → A measure of variability of a quantative variable.
Crude definition: avg distance of our data from its mean

4. Unusual observations - Are there outliers which are very different from most observations.

Random Processes (P.3)

Random Process
Simulation
Probability
} Definitions

Monty Hall Card Game - Boards

Monty Hall Applet

Basics of R

Redfin in R