

Hello World!

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Introduction

This frame describes why my new statistical method is soooo important.

Notation

- Suppose Y_i for $i = 1, \dots, n$ is a random sample from a normal population with mean μ and variance σ^2 .

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Model

- Important equation:

$$f(y) = \frac{1}{\sigma\sqrt{2\pi}} \exp((y - \mu)^2/2\sigma^2)$$

- Another important equation:

$$f(y) = \frac{1}{\sigma\sqrt{2\pi}} e^{\frac{(y-\mu)^2}{2\sigma^2}}$$

Proposed methodology

An environment involving lists:

- 1 First item
- 2 Second item

| | | |
|---|---|--|
| A | B | |
| C | D | |

Simulation study

- In Section ??, we showed that our proposed methods will change the statistical world as $n \rightarrow \infty$.
- Now, we will show the same is true for a fixed sample size of n .

Data

```
> cereal<-read.csv(file = "c:\\data\\cereal.csv")
> head(cereal)
```

| | ID | Shelf | Cereal | size_g |
|---|----|-------|--------------------------------------|--------|
| 1 | 1 | 1 | Kellog's Razzle Dazzle Rice Crispies | 28 |
| 2 | 2 | 1 | Post Toasties Corn Flakes | 28 |
| 3 | 3 | 1 | Kellog's Corn Flakes | 28 |
| 4 | 4 | 1 | Food Club Toasted Oats | 32 |
| 5 | 5 | 1 | Frosted Cheerios | 30 |
| 6 | 6 | 1 | Food Club Frosted Flakes | 31 |

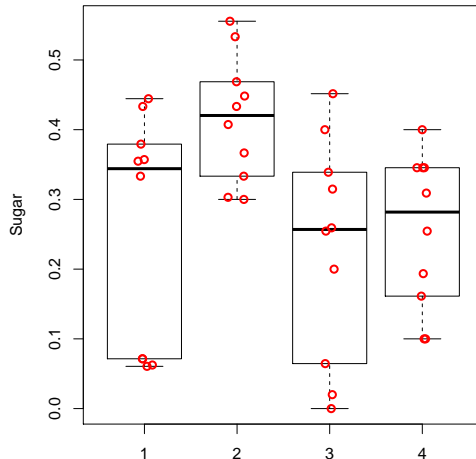
| | sugar_g | fat_g | sodium_mg |
|---|---------|-------|-----------|
| 1 | 10 | 0 | 170 |
| 2 | 2 | 0 | 270 |
| 3 | 2 | 0 | 300 |
| 4 | 2 | 2 | 280 |
| 5 | 13 | 1 | 210 |
| 6 | 11 | 0 | 180 |

Analysis

```
> cereal$sugar<-cereal$sugar_g/cereal$size_g
> cereal$fat<-cereal$fat_g/cereal$size_g
> cereal$sodium<-cereal$sodium_mg/cereal$size_g
> aggregate(formula = sugar ~ Shelf, data = cereal, FUN =
  mean)
  Shelf      sugar
1     1 0.2568366
2     2 0.4149686
3     3 0.2303732
4     4 0.2554839

> aggregate(formula = sugar ~ Shelf, data = cereal, FUN =
  sd)
  Shelf      sugar
1     1 0.16729566
2     2 0.09001019
3     3 0.15770057
4     4 0.11010226
```

Plot



Shelf

Discussion

Thank you