Contents

AB Test

- H_0: NULL hypothesis,
  - a particular treatment has no effect
  - there is no difference between the controlled(version A) and treatment(version B) group
- H_1: alternative hypothesis
- Type I Error, False Positive, $P(\hat{H_1}|H_0 \text{ is true}), \alpha$, believing a lie, false alarm,
- type II error, Flase Negative, $P(\hat{H_0}|H_1 \text{ is true}), \beta$, faling to raise an alarm
- Power: $1 - \beta$
- Recall: $\frac{TP}{TP+FN}$
- Precision: $\frac{TP}{TP+FP}$

  A random sample of n observations $X_i, i = 1, 2, \cdots, n$ is taken from a normal populatoni with mean μ and variance σ^2.
  - sample mean $\bar{X} = \sum_{i=1}^{n} X_i$

– sample variance