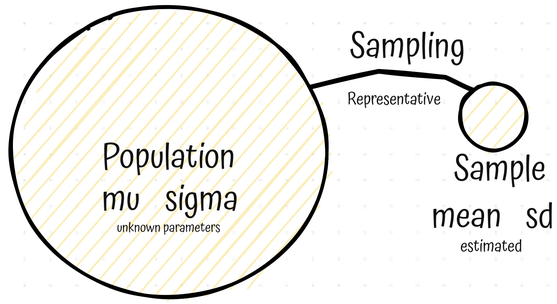
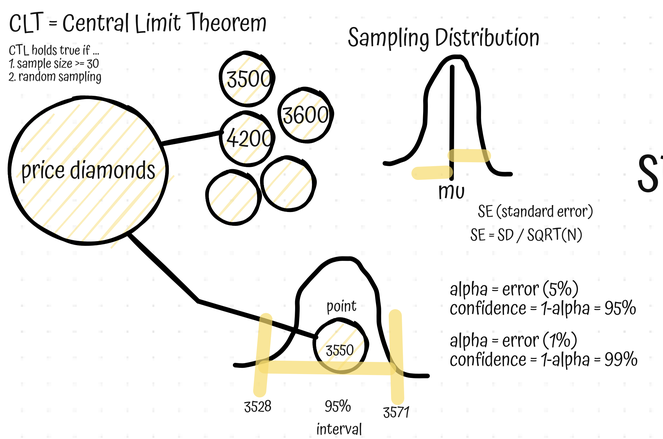
Essential Statistics Part 2

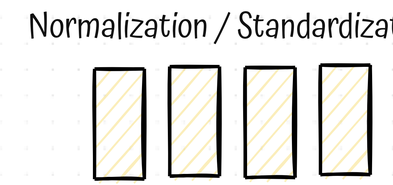
Z-Score (standardization)
CLT
Confidence interval
Inferential statistics
Hypothesis testing
p-value
AB test
Linear regression

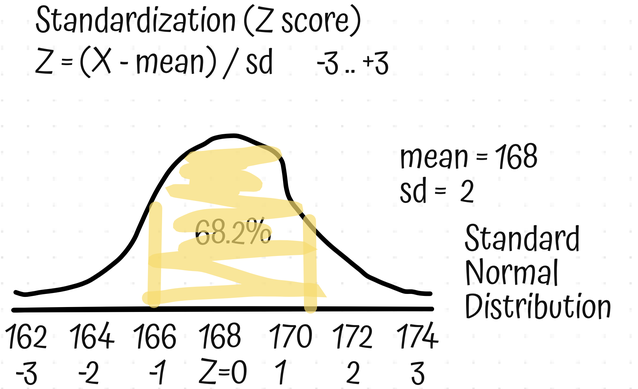


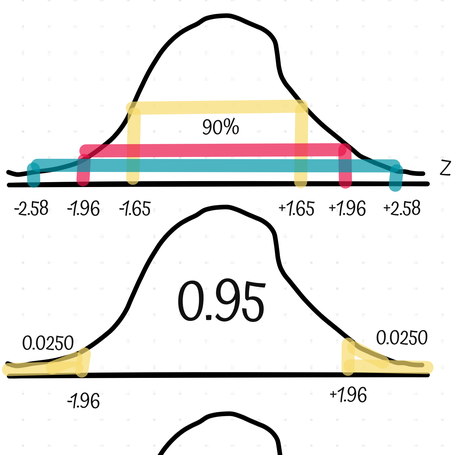


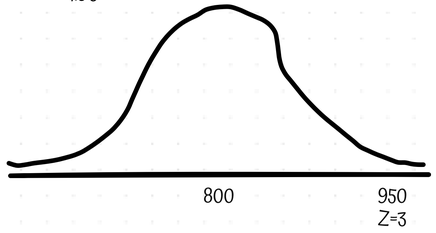
dtac
20m sim cards

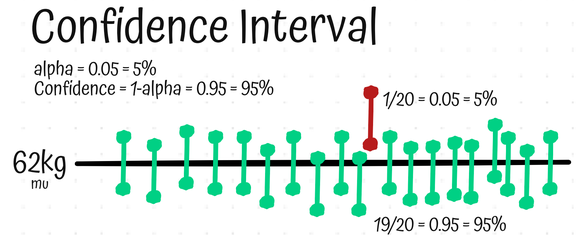
statistics vs. analytics

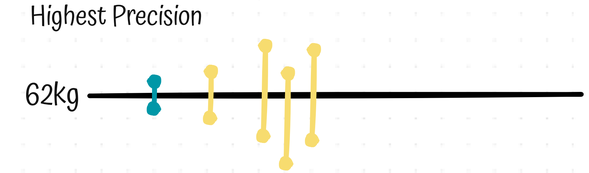






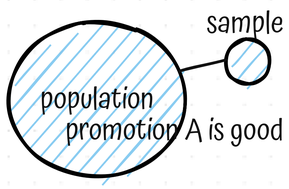






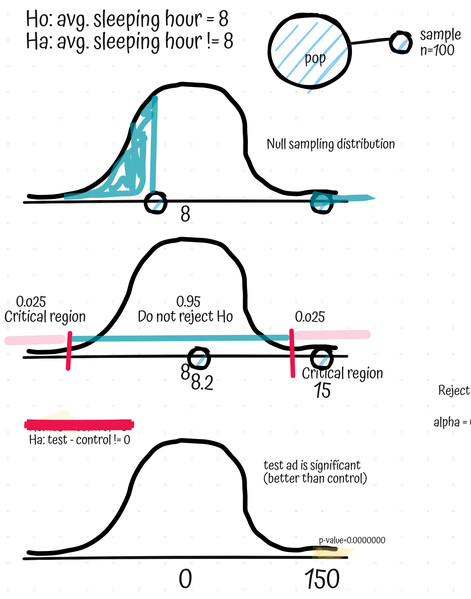
Summary Key Learning

- Z Score (Standardization vs. Normalization)
- CLT
- Confidence Interval
- Point vs. Interval Estimate
- alpha + confidence level = 100%
- CI more precision 90% better than 99%
- CI more precision -> Increase sample size N
- Hypothesis testing p-value
- p-value = p(observed data or more extreme | ho is true)
- Reject Ho if p.value <= alpha (alpha 5%)
- AB test vs. RCT / Linear Regression

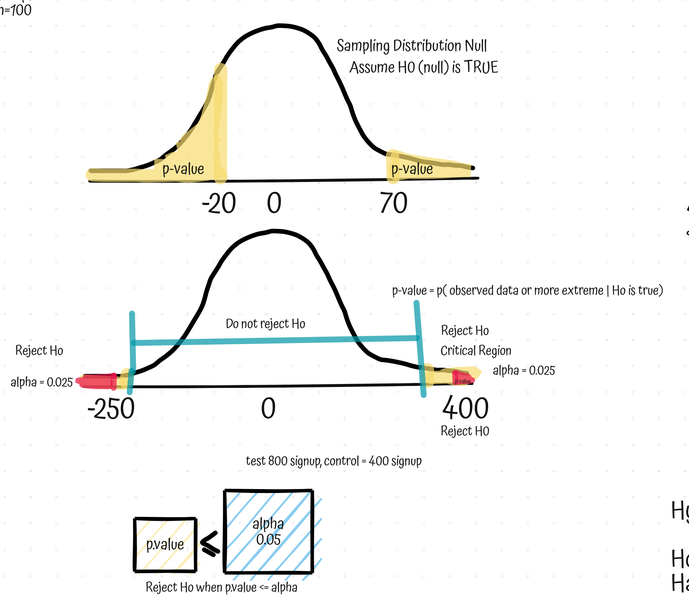


Hypothesis testing

Ho: avg. sleeping hour = 8
Ha: avg. sleeping hour != 8



p-value =0.051
alpha = 0.05
Do not reject Ho

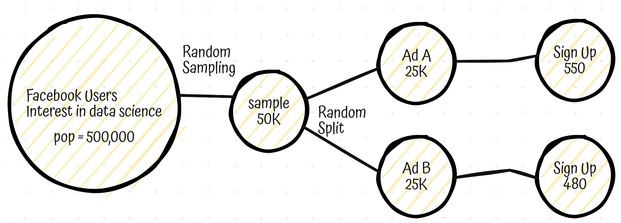


Inferential Statistics

1. Comparison
2. Association
3. Prediction

AB Testing

นัยสำคัญทางสถิติ แปลว่า ข้อมูลที่เราเห็นตรงหน้าไม่ใช่เรื่องฟลุ๊คๆ



Hypothesis

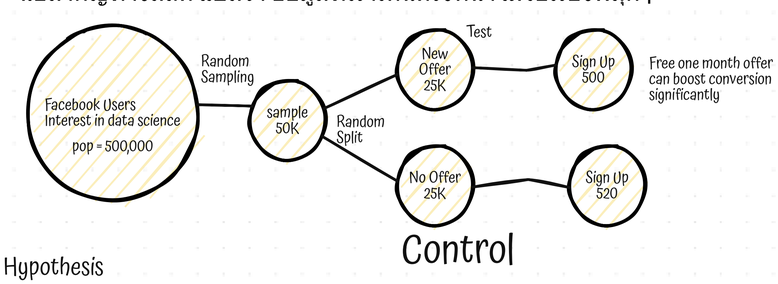
Ho (null): average sign up A = B
Ha (alternative): average sign up A != B

Hypothesis Two-Tailed Test

Ho (null): average sign up A - B = 0
Ha (alternative): average sign up A - B != 0

Randomized Control Trial - RCT

นัยสำคัญทางสถิติ แปลว่า ข้อมูลที่เราเห็นตรงหน้าไม่ใช่เรื่องฟลุ๊คๆ



Hypothesis

Ho (null): average sign up test - control = 0
Ha (alternative): average sign up test - control != 0

How to test significance?
Reject Ho if p-value <= alpha (5%)