Statistical Inference Cheat Sheet

by miksib10 via cheatography.com/36715/cs/13549/

Sampling Distribution

Inference: statistic (sample, $\bar{x}$) --> parameter (population, μ)

CLT: large n --> $\bar{x} \sim N(\mu, \sigma/\sqrt{n})$ - as n increases, $\bar{x}$ approaches μ

Sample Proportion: mean = p and s.d. = $\sqrt{[p(1-p)/n]}$

Z-statistic: when n>30, $z=(\bar{x}-\mu)/(\sigma/\sqrt{n})$ --> z-table

T-statistic: when n<30, d.f.=n-1 --> t-table

Statistical Inference

Inference	Confidence Interval	Tests of Significance
- probability --> trustw-orthy?	estimate+/- MoE	H0: "no effect"
- sample --> population	$\bar{x}$ +/- $z*(\sigma/\sqrt{n})$	Ha: what we are testing
- based on sampling distribution	MoE ↓ = σ↓ = n↑= confidence ↓	Assume H0 --> what is the P of a result as/more extreme than statistic --> reject if P≤α

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