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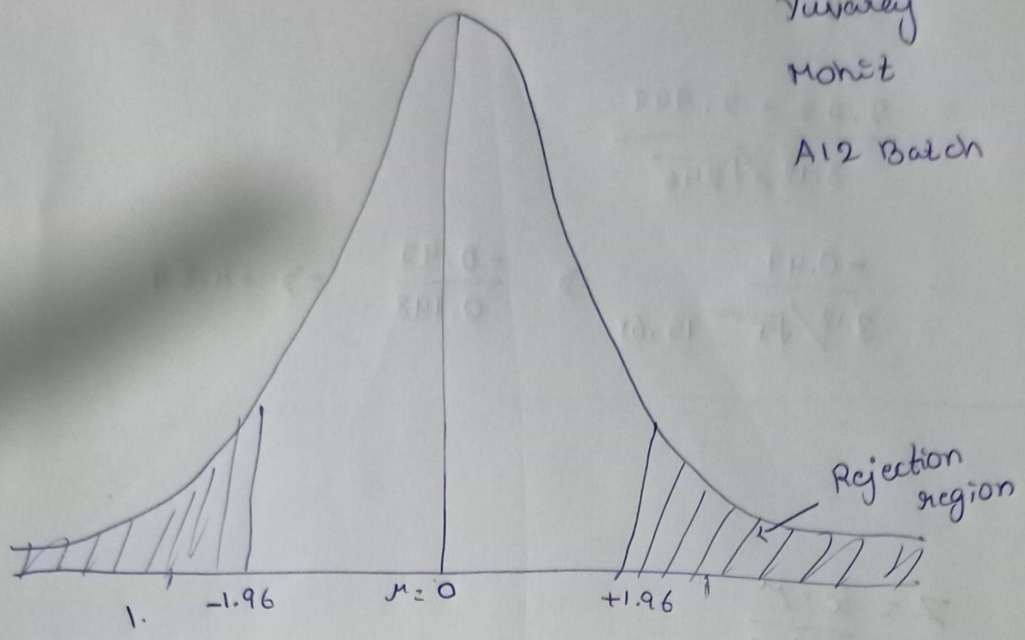
Kartik
Yuvaraj
Mohit

A12 Batch



↳ ~~95%~~ Let 95% of Confidence table

↳ Z = 1.7~~5~~ from the z-table

↳ we need to use t distribution whenever the n<30 if ~~the~~ SD is unknown

$$t = \frac{\bar{x} - \mu}{SD/\sqrt{n}}$$

$\bar{x}$ => Sample Mean

μ => Population Mean

SD => Standard deviation

n => Sample Size

$n \leq 30$ if we know SD we can use normal distribution

$$Z = \frac{\bar{x} - \mu}{SD/\sqrt{n}}$$

$$= \frac{4 - 2.99}{1.97/\sqrt{238}} \Rightarrow \frac{4 - 2.99}{1.97/\sqrt{238}}$$

$$Z = 1.99 \quad = 1.99 \Rightarrow \text{reject}$$

B Dict

$$Z = \frac{\bar{x} - \mu}{SD/\sqrt{n}}$$

$$= \frac{2.02 - 2.999}{3.12/\sqrt{246}}$$

$$= \frac{-0.97}{3.12/15.68} \Rightarrow \frac{-0.97}{0.198} \Rightarrow -4.89$$