

M339G: August 29th, 2025.

What if the sample is not normal?

Still estimating μ

How do you triage?

• symmetric & unimodal & more

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• sum of two independent $U(0,1)$

• Laplace

• diagnostics

• histogram

• boxplots

• q-q plots

• Shapiro-Wilk Test

What if normality fails?

→ Sufficiently large data sets \Rightarrow CLT

→ Boot Strap

Data set:

x_1, \dots, x_n

draw with replacement
from the same data set.
w/ B the number
of resamplings.

$\bar{x}_1, \bar{x}_2, \dots, \bar{x}_B$

Create a confidence interval:
e.g., 2SE or quantile.