AUA CS108, Statistics, Fall 2020
Lecture 34

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- Maximum Likelihood Method (MLE)

Examples

Example: Find the MLE for p in the *Bernoulli*(p) Model.

Solution: OTB

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Example: Find the MLE Estimator for λ in the *Exp*(λ) Model.

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Example: Find the MLE Estimator for θ in the *Unif*$[0, \theta]$ Model.

Solution: OTB

Examples, MLE

Example: Assume we have an observation

$$0, 1, 1, 2, 1, 0, 0, 1, 1$$

from the following Model:

X	0	1	2
$\mathbb{P}(X = x)$	$\frac{\theta}{10}$	$\frac{\theta}{5}$	$1 - \frac{3\theta}{10}$,

where $\theta \in [0, \frac{10}{3}]$.

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$\mathbb{P}(X = x)$	$\frac{\theta}{10}$	$\frac{\theta}{5}$	$1 - \frac{3\theta}{10},$

where $\theta \in [0, \frac{10}{3}]$. Find the MLE Estimator and MLE Estimate for θ.

Solution: OTB