

MITx: 14.310x Data Analysis for Social Scientists

Heli



- Module 1: The Basics of R and Introduction to the Course
- **Entrance Survey**
- Module 2: Fundamentals of Probability, Random Variables, Distributions, and Joint Distributions
- Module 3: Gathering and Collecting Data, Ethics, and Kernel **Density Estimates**
- Module 4: loint, Marginal, and Conditional **Distributions & Functions of Random** Variable

Module 11: Intro to Machine Learning and Data Visualization > Machine Learning I > Estimation vs. Prediction - Quiz

Estimation vs. Prediction - Quiz

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Question 1

1/1 point (graded)

True or False: Machine algorithms provide unbiased, consistent estimators.

- a. True
- b. False

You have used 1 of 1 attempt

Correct (1/1 point)

Question 2

Submit

1/1 point (graded)

Which of the following are true statements regarding the similarities and differences between estimation and prediction? (Select all that apply)

- Module 5: Moments of a Random Variable,
 Applications to Auctions,
 Intro to Regression
- Module 6: Special
 Distributions, the
 Sample Mean, the
 Central Limit Theorem,
 and Estimation
- Module 7: Assessing and Deriving Estimators -Confidence Intervals, and Hypothesis Testing
- Module 8: Causality,
 Analyzing Randomized
 Experiments, &
 Nonparametric
 Regression
- Module 9: Single and Multivariate Linear
 Models
- Module 10: Practical
 Issues in Running

- a. Estimation provides a $\hat{\beta}$, which is (or at least aims to be) an unbiased estimator, whereas prediction does not provide you with coefficients that are meaningful.
- b. Prediction doesn't require us to make assumptions about the data generating process, whereas in estimation, we make strict assumptions about the data generating process.
- c. We can back out meaningful coefficients in both estimation and prediction models.
- d. Prediction assumes low-dimensionality in order to back up the correct coefficients.



Submit You have used 1 of 2 attempts

Correct (1/1 point)

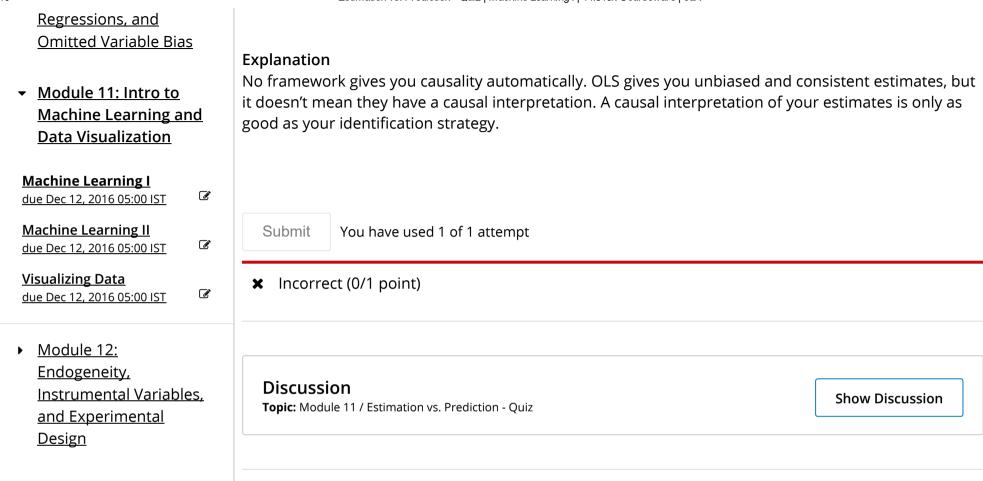
Question 3

0/1 point (graded)

True or False: One benefit of the estimation framework is that it gives you causality.

a. True X

b. False



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