Bookmarks

- 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: Joint, Marginal, and Conditional Distributions &

Module 11: Intro to Machine Learning and Data Visualization > Machine Learning II > Estimation, Prediction, and Things You Can See - Quiz

Estimation, Prediction, and Things You Can See - Quiz

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Question 1

0.0/1.0 point (graded)

True or False: Prediction is “observable,” whereas estimation is “unobservable”.

- a. True ✖
- b. False

Explanation

Both prediction and estimation are observable, in the sense that if we acquire new data we can literally see (and measure) how well our model predicts. However, the difference is that the machine learning framework tuning relies on the observability of the model’s out-of-sample ability to predict in order to estimate the model that corresponds to the complexity level that generates the best prediction. On the other hand, usually in estimation, we don’t have an out-of-sample measure of the model’s prediction (although we could), so we don’t “observe” it in that sense. However, we could, i.e. there’s no reason we can’t see how well a model that resulted from an

estimation predicts a certain outcome if we had data. (Note: the reason this is not usually done is because the type of data we usually need to answer meaningful causal questions tends to be hard to get or expensive to collect.)

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Discussion

Topic: Module 11 / Estimation, Prediction, and Things You Can See - Quiz

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