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 & Functions of Random Variable

Kernel Regression - Quiz

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Question 1

1/1 point (graded)

True or False: Kernel regressions give you the causal impact of X on Y.

- a. True
- b. False ✔

Explanation

The functional form of your estimator does not affect whether or not your estimates are causal. Just like with OLS, the source of your variation is what affects the interpretation of your estimates. So whether your kernel regression estimator can be interpreted causally or not, that ultimately depends on your experimental or quasi-experimental design.

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- 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**

Causality
Finger Exercises due Nov 21, 2016 at 05:00 IST

Analyzing Randomized Experiments
Finger Exercises due Nov 21, 2016 at 05:00 IST

✔ Correct (1/1 point)

Question 2

0/1 point (graded)

True or False: A kernel regression is equivalent to drawing a line through the weighted average of points for a given x in each interval.

- a. True ✖
- b. False

Explanation

Kernel regression is a technique that is used to estimate the conditional of expectation of y given x. As Professor Duflo showed in class, by Bayes' rule, this is given by:

$$E(Y|X=x) = \frac{\int y(f(x,y)dy}{f(x)}$$

In kernel regression, the joint density $f(x,y)$ and $f(x)$ are replaced by their empirical counterparts: the kernel density estimators. The resulting estimator, for a given x, is a weighted (local) sum of the y_i, where the weights are inversely proportional to to the distance of the corresponding x_i from x. This is not the same as drawing a line of best fit through your points.

Use of Randomization and Nonparametric Regression
Finger Exercises due Nov 21, 2016 at 05:00 IST

Module 8: Homework
Homework due Nov 14, 2016 at 05:00 IST

- Module 9: Single and Multivariate Linear Models
- Exit Survey

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✖ Incorrect (0/1 point)

Discussion

Topic: Module 8 / Kernel Regression - Quiz

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1

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