

Exam Review

Linear Regression

Spring 2019 Prof. Chase Meyer

What is Law of Large Numbers? How does it apply to regression?

How likely is to find a t -statistic as large in magnitude of 1.96 when the null is true?

Give an example of a categorical, ordinal, and a continuous variable.

Interpret a correlation coefficient of -0.93.

What is the Sum of Squared Errors? How does it apply to regression?

R^2 is the measure of how much variation in y is explained by your x variable(s).

Below are two interpretations of the regression result of the relationship between the divorce rate and the unemployment rate. Which interpretation is correct? Why?

- “If the true effect of unemployment on the expected divorce rate were zero, there is a less than 5% chance that we would have observed a t -statistic as large in magnitude as we did.”
- “There’s a less than a 5% chance that the effect of unemployment on the expected divorce rate is zero.”

What are the 7 assumptions of OLS?

Without conducting an experiment what are all the ways you can get as close to proving causality as possible with OLS?

Why is random selection in experiments so important?

Explain the principle of parsimony.

Why should you report the Adjusted- R^2 ?