

Applied Statistics: Basic Bivariate Techniques

Applied statistics is the use of statistical methods to solve real-world problems. It is a valuable tool in many fields, including business, science, and medicine. Bivariate techniques are a set of statistical methods used to analyze the relationship between two variables. These techniques can be used to identify trends, predict outcomes, and test hypotheses.



Applied Statistics I: Basic Bivariate Techniques

by Rebecca M. Warner

★★★★☆ 4.3 out of 5

Language : English

File size : 124891 KB

Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

Word Wise : Enabled

Print length : 647 pages



Correlation

Correlation is a measure of the strength and direction of the relationship between two variables. The correlation coefficient, which ranges from -1 to 1, indicates the degree of association between the variables. A positive correlation indicates that the variables move in the same direction, while a negative correlation indicates that they move in opposite directions. The strength of the correlation is determined by the absolute value of the correlation coefficient.

There are several different types of correlation coefficients, including the Pearson correlation coefficient, the Spearman rank correlation coefficient, and the Kendall tau correlation coefficient. The Pearson correlation coefficient is the most commonly used measure of correlation. It is based on the assumption that the two variables are normally distributed. The Spearman rank correlation coefficient and the Kendall tau correlation coefficient are non-parametric measures of correlation that can be used when the variables are not normally distributed.

Regression

Regression is a statistical method used to predict the value of one variable (the dependent variable) based on the value of another variable (the independent variable). The relationship between the variables is represented by a regression line. The slope of the regression line indicates the change in the dependent variable for each unit change in the independent variable. The intercept of the regression line indicates the value of the dependent variable when the independent variable is equal to zero.

There are several different types of regression models, including linear regression, multiple regression, and nonlinear regression. Linear regression is the simplest type of regression model. It assumes that the relationship between the variables is linear. Multiple regression is a more complex type of regression model that allows for the inclusion of multiple independent variables. Nonlinear regression is a type of regression model that allows for the relationship between the variables to be nonlinear.

Hypothesis Testing

Hypothesis testing is a statistical method used to determine whether there is a statistically significant difference between two groups. The null hypothesis is the hypothesis that there is no difference between the groups. The alternative hypothesis is the hypothesis that there is a difference between the groups.

The hypothesis test is conducted by calculating the test statistic. The test statistic is a measure of the difference between the groups. The p-value is the probability of getting a test statistic as large as the one that was calculated, assuming that the null hypothesis is true. If the p-value is less than the significance level, then the null hypothesis is rejected and the alternative hypothesis is accepted.

Applied statistics is a valuable tool that can be used to solve real-world problems. Bivariate techniques are a set of statistical methods used to analyze the relationship between two variables. These techniques can be used to identify trends, predict outcomes, and test hypotheses.



Applied Statistics I: Basic Bivariate Techniques

by Rebecca M. Warner

★★★★☆ 4.3 out of 5

Language : English

File size : 124891 KB

Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

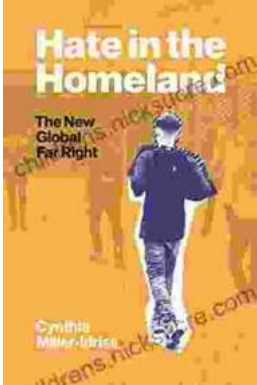
Word Wise : Enabled

Print length : 647 pages

FREE

DOWNLOAD E-BOOK





Hate In The Homeland: Exploring the Alarming Rise of Domestic Extremism in the United States

In recent years, the United States has witnessed a disturbing surge in domestic extremism, characterized by violent acts, hate-filled rhetoric,...



My Golf Blog Revolution: Open Stance

Are you ready to revolutionize your golf game? The Open Stance technique is a game-changing approach that can transform your swing, improve accuracy, and boost power....