

 Lagunita is retiring and will shut down at 12 noon Pacific Time on March 31, 2020. A few courses may be open for self-enrollment for a limited time. We will continue to offer courses on other online learning platforms; visit <http://online.stanford.edu>.

Course > Inference: Relationships $Q \rightarrow Q$ > Inference for Relationships Summary > Wrap-Up (Inference for Relationships)

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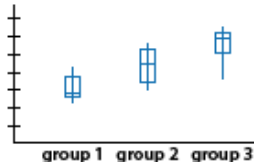
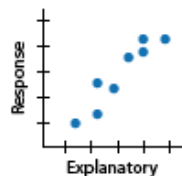
Wrap-Up (Inference for Relationships)

We've just completed the part of the course about the inferential methods for relationships between variables. The overall goal of inference for relationships is to assess whether the observed data provide evidence of a significant relationship between the two variables (i.e., a true relationship that exists in the population).

Much like the part about relationships in the Exploratory Data Analysis (EDA) section, this part of the course was organized according to the role and type classification of the two variables involved. However, unlike the EDA section, when it comes to inferential methods, we further distinguished between three sub-cases in case $C \rightarrow Q$, so essentially we covered 5 cases in total.

The following very detailed role-type classification table summarizes both EDA and inference for the relationship between variables:

Role-Type Classification Table

		Response																	
Explanatory	Categorical	Categorical	Quantitative																
		C → C To Visualize 2-Way Table <table><tr><td></td><td>Outcome A</td><td>Outcome B</td><td>Outcome C</td></tr><tr><td>Group 1</td><td></td><td></td><td></td></tr><tr><td>Group 2</td><td></td><td></td><td></td></tr><tr><td>Group 3</td><td></td><td></td><td></td></tr></table> Numerical Summary Conditional Percentages Formal Inference Chi-Square test for Independence		Outcome A	Outcome B	Outcome C	Group 1				Group 2				Group 3				C → Q To Visualize Side-by-side Boxplots  Numerical Summary Descriptive Statistics Formal Inference 2 independent samples: Two-Sample t-test 2 dependant samples: Paired t-test > 2 independent samples: ANOVA > 2 dependant samples: Not covered in the course
			Outcome A	Outcome B	Outcome C														
Group 1																			
Group 2																			
Group 3																			
Quantitative	Q → C Logistic Regression Not covered in this course	Q → Q To Visualize Scatterplot  Numerical Summaries Correlation Coefficient Formal Inference Regression line. Significance test for the linear relationship (t-test for the slope).																	

