BSTA 513/613 Syllabus

Description

Welcome to BSTA 513/613! In this course, we will continue to learn about regression analysis, but not with categorical outcomes. We will build some theoretical understanding in order to interpret and apply logistic regression models appropriately. We will learn how to build a logistic regression model, interpret the model and coefficients, and diagnose potential issues with our model.

Course Learning Objectives

At the end of this course, students should be able to...

1. Apply and interpret a variety of hypothesis-testing procedures for two-way and three-way contingency tables
2. Compute and interpret measures of association for binary and ordinal data.
3. Calculate and correctly interpret odds ratios using logistic regression, make comparison across groups and examine relationship between binary outcome and predictor variables.
4. Apply appropriate model-building strategies for logistic regression. Effectively use statistical computing packages for contingency table and logistic regression procedures.
5. Perform Poisson regression analysis using count data and interpret model estimates, make comparison across groups and examine relationship between outcome and predictor variables.
6. Coherently summarize methods and results of data analyses, and discuss in context of original health-related research questions to audiences with varied statistical background.

These learning objectives were adapted from Maria Tackett's Regression Analysis course.