Week Two

Help Center

Likelihood Ratio and the Wald Test

During our second week of the course, we will further our knowledge of logistic regression analysis by doing some hypothesis testing. We will start the week by familiarizing ourselves with the likelihood ratio and the Wald test procedures for identifying significant variables in a multiple logistic regression model.

We will also review confidence interval estimation and will end the week with some examples of likelihood ratio and Wald statistic testing using the STATA software, which should be helpful for this week's homework assignment.

Lectures

Please click on the links below to access the video lectures for this second week

- **Likelihood Ratio Test**
- **Confidence Intervals**
- **Multiple Logistic Regression**
- **Fitting logistic model: Low birth weight example I**
- **Fitting logistic model: Low birth weight example II**
- **Discriminant Analysis and Week Two Homework**

Lecture Material

Please click on the link below to download the slides of the second week

Week Two: "Likelihood Ratio and the Wald Test"

Conversations

Please join in the conversations around regression analysis in our **community forums** area. You can ask and answer questions and discover insights and help for yourself and others as we come together to encourage each other in our exploration.

Key Terms

Below are definitions of some important terms covered this week:

- **Likelihood Ratio Test**: A test that is used to assess the significance of an independent variable within the model by comparing the value of the model's deviance with an without the independent variable in the model.
- **Multiple Logistic Regression**: A logistic regression model that contains more than one predictor variable. These predictor variables can be binary, categorical, continuous, etc.
- **Naïve Model**: The model that does not contain other covariate estimates.
- **Saturated Model**: A model that predicts an outcome variable exactly.
- **Goodness of Fit**: Whether or not the predicted values are an accurate representation of the observed values in an absolute sense.

Homework

Please watch the following video, **Homework Highlights from Week One**, to review the homework from last week.

Navigate to the **Week Two Homework** page to view and download the homework for this week.

Quiz

After you've gone through the materials for this week please be sure to visit the **quizzes area** to complete this week's quiz.

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