Module 6: Categorical Predictors

Live Sessions	Office Hours	
July 24: 9:00 - 9:50 am EDT (Blue), 10:00 - 10:50 am EDT (Orange)	Tue & Thu: 9:00 - 9:50 am EDT (Blue), 10:00 - 10:50 am EDT (Orange).	**Dr. Woo** yjw4b@virginia.edu

MODULE WELCOME

Categorical variables (also known as qualitative variables) are variables that classify observations into groups. So far, we have focused on using quantitative predictors in a multiple linear regression (MLR) model. In this module, you will learn how to use the MLR model when we have predictors that are categorical, using indicator variables. You will also learn how to interpret the MLR model when we have categorical predictors.

In addition, you will learn what it means when the predictors have an interaction effect on the response variable. Although this module explores the concept of interaction with categorical predictors, keep in mind that interaction can occur with any types of predictors.

In this module, you will complete and submit Project #1.

ESSENTIAL QUESTIONS

- *How do we use indicator variables for categorical predictors in an MLR model?*

- *What does it mean when there is an interaction between the predictors?*

- *How do we interpret the MLR model when we have categorical predictors, with and without interaction?*

LEARNING OBJECTIVES

- Build your multiple regression model when categorical predictors are present, and interpret results from such models contextually.

ASSIGNED RESOURCES

- *Introduction to Linear Regression Analysis*, Sections 8.1, 8.2, and 8.3.

- Module 6 R tutorial, data set: wine.txt, and R-code: tutorial_module 6.R

- Module 6 guided question set and data set: cereal.txt

OPTIONAL

Visit the Module 6 Discussion Forum to communicate with one another about the assigned readings and resources or to discuss any other topics of interest with your instructor or fellow students.

💬 Module 6 General Discussion

MODULE OVERVIEW

- 📂 6.1: Introduction to the Lesson
- 📂 6.2: Indicator Variables
- 📂 6.3: Regression and ANOVA
- 📂 6.4: Recap of Module 6
- 📂 6.5: R Tutorial for Module 6
- 📂 6.6: Module 6 Live Session