

Chapter 10

How to make predictions with a linear regression model

Objectives

Applied

1. Use scatter plots or heatmaps to identify correlations.
2. Use the `corr()` method to identify correlations.
3. Use Scikit-learn to create and validate a linear regression model and to use the model to make predictions.
4. Use Seaborn to plot the predicted values and the residuals of a linear regression model.
5. Use the Seaborn `lplot()` method to create and plot these types of linear regression models: simple, logistic, polynomial, and lowess.
6. Use the Seaborn `residplot()` method to plot the residuals for linear regression models.

Knowledge

1. Describe a linear regression model.
2. Distinguish between a simple linear regression and a multiple linear regression in terms of independent and dependent variables.
3. Describe two ways to identify the correlations between the variables in a `DataFrame`.
4. In general terms, describe the procedure for creating, validating, and using a regression model.
5. Describe regression residuals.