Project 2.2: Recommend a City

Complete each section. When you are ready, save your file as a PDF document and submit it here: [https://classroom.udacity.com/nanodegrees/nd008/parts/3d606c26-cb8e-43af-9199-7e3577aa3392/project#](https://classroom.udacity.com/nanodegrees/nd008/parts/3d606c26-cb8e-43af-9199-7e3577aa3392/project)

**Note that this project is a continuation from Project 2.1: Data Cleanup. You must meet specifications for Project 2.1 before you can continue on with this Project 2.2**

## Step 1: Linear Regression

*Create a linear regression model off your training set and present your model. Visualizations are highly encouraged in this section. (750 word limit)*

***Important:*** *Make sure you have dealt with outliers and removed one city from your training set. You should have* ***10 rows*** *of data before you begin modeling the dataset.*

*Build a linear regression model to help you predict total sales.*

*At the minimum, answer these questions:*

1. How and why did you select the [predictor variables (see supplementary text)](https://classroom.udacity.com/courses/ud976/lessons/4e33b70a-72a4-47cb-959a-28632ae6aaff/concepts/631d190c-8626-4dd7-92df-f5bd96913c48) in your model? You must show that each predictor variable has a linear relationship with your target variable with a scatterplot.
2. Explain why you believe your linear model is a good model. You must justify your reasoning using the statistical results that your regression model created. . For each variable you selected, please justify how each variable is a good fit for your model by using the p-values and R-squared values that your model produced.
3. What is the best linear regression equation based on the available data? Each coefficient should have no more than 2 digits after the decimal (ex: 1.28)

## Step 2: Analysis

*Use your model results to provide a recommendation. (500 word limit)*

*At the minimum, answer this question:*

1. Which city would you recommend and why did you recommend this city?

Before you Submit

Please check your answers against the requirements of the project dictated by the [rubric](https://review.udacity.com/#!/rubrics/381/view) here. Reviewers will use this rubric to grade your project.