Analysis of Cereal Dataset

This analysis of Cereal Dataset consisting of 77 observations look at nutritional content in particular fat and caloric content per serving. In order to effectively do that, the dataset was manipulated to get rid of any missing values that may interfere with the analysis.

The Figure 1. demonstrates a linear relationship between grams of fat and caloric content per serving with **Caloric Content**= 95.13(SE 3.14)+9.81(Fat) (R^2=0.21 p<.0001). This regression coefficient suggests that linear model describes one fifth of the observed values. The regression equation suggests that on average, one gram increase in fat content increases caloric value of cereal by 9.81 with 95% confidence of (5.41,14.20) where as cereals with no fat content had on average 95.13 calories per serving. The confidence interval of fat caloric value means that if experiment were to be replicated, the average caloric value increase could vary from 5.41 to 14.20 calories per serving.

However, Prediction Interval is different that of Confidence Interval, it gives precision for future observation for a particular value. Consequently, cereal with 4 g of fat/per serving could have an average expected value of calories of 134.35 (93.37048 175.3407). It is important to note that prediction interval will always be wider than a confidence interval.