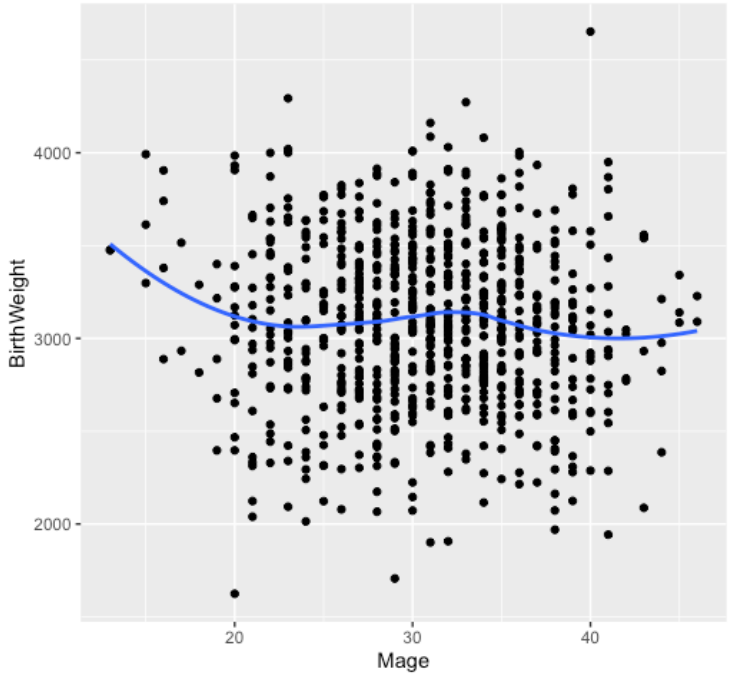
Birth Weights EDA

The main reasons for analyzing the data are to be able to understand the effect of the mother's age on a baby's birth weight.
The goals of the analysis is to be able to discover if there is more risk of a low birth weight with a higher mother's age, finding out if race has an effect on birth weight, and be able to make some predictions about a future baby's birth weight. This is important because it can give people insight about what age would be ideal for a baby to be born healthy and help them make decisions that would reduce risk.



The graphic above shows the birth weights of babies and the mothers ages. We can see that throughout the age range, the weights seem to be more or less similar.

I am not sure there are aspects in the data that could cause correlation, since every observation seems to be independent from the rest because each observation represents a different baby and mother. In other words no observation influences the outcome of other observations.

A statistical model that could be used to analyze the data could be the following:
$Yi = \beta 0 + \beta i1Xi1 + \beta i2Xi2 + \ldots + \beta pXip + E$
Where:
Yi: the response variable
Xi: explanatory variables
B0: intercept
Bp: coefficients for each variable
E: residuals

This model would help us achieve the goals listed earlier because it would show how much the explanatory variables are influencing the response variable.

I am not sure how to perform the analysis with correlated data.