Regression

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birthwt {MASS}   Risk Factors Associated with Low Infant Birth Weight

The birthwt data frame has 189 rows and 10 columns. The data were collected at Baystate Medical Center, Springfield, Mass during 1986.

This data frame contains the following columns:

- low: indicator of birth weight less than 2.5 kg

- age: mother's age in years

- lwt: mother's weight in pounds at last menstrual period

- race: mother's race (1 = white, 2 = black, 3 = other)

- smoke: smoking status during pregnancy

- ptl: number of previous premature labours

- ht: history of hypertension

- ui: presence of uterine irritability

- ftv: number of physician visits during the first trimester

- bwt: birth weight in grams

Apply several linear regression models to the birthwt dataset

1. Inspect the dataset

2. Does the mother's age allow us to predict the birth weight ?

3. Check the assumptions of the model you used in 2.

4. Can you better predict birth weight using other variables in the dataset, in addition to mother's age ?

5. Which set of variables in the dataset predict best birth weight ?