DDP_Course_Project

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App Description

App Purpose

This application allows you to explore height prediction models using age.

How to Use

1. Choose an age using the slider bar
2. Submit

You could explore the difference between boys and girls using the tabs.

Data Source

Simulated data is obtained from the *child_growth* dataset in the *doBy* package.

```
library(doBy)
data("child_growth")
my_data <- child_growth
my_data$gender <- factor(my_data$gender)
male_data <- subset(my_data, gender == "boy")
```

Models

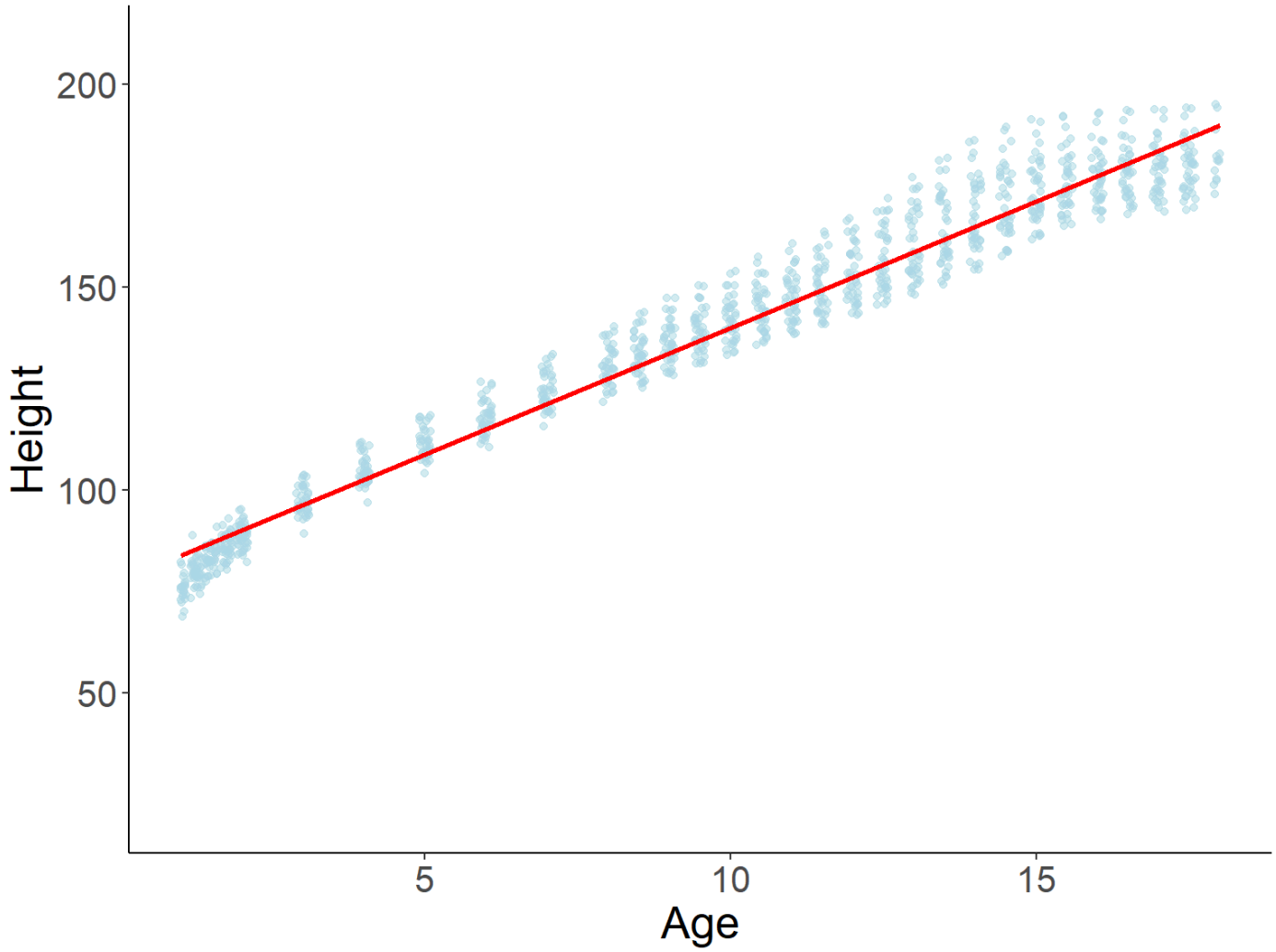
Two models are used to predict child height using age.

1. Linear model
2. Logistic model

Model 1: Linear model

Using male data as an example here. Model fitting indicated by the red line.

```
model1_male <- lm(height ~ age, data = male_data)
```



Model 2: Logistic model

Using male data as an example here. Model fitting indicated by the blue line.

```
model2_male <- nls(height ~ Asym / (1 + exp((xmid - age)/scal)),
                   data = male_data,
                   start = list(Asym = 180, xmid = 13, scal = 2))
```