Tutorial for Linear model & Linear Mixed Effects in R

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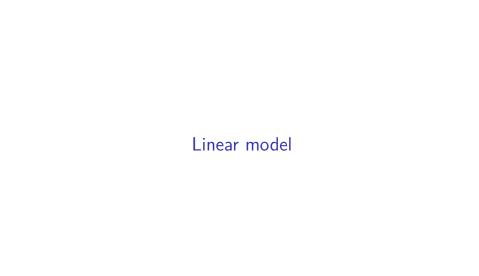
Intro of Intro

Linear model



Set-up packages

```
if(!is.element("caret", installed.packages()[, 1])){
   install.packages("caret")
}
if(!is.element("dplyr", installed.packages()[, 1])){
   install.packages("dplyr")
}
require('caret')
require('dplyr')
```



Setting data frame

```
pitch = c(233, 204, 242, 130, 112, 142)
sex = c(rep("female", 3), rep("male", 3))
my.df = data.frame(sex, pitch) # data frame of 6 informant
my.df
```

```
## sex pitch
## 1 female 233
## 2 female 204
## 3 female 242
## 4 male 130
## 5 male 112
## 6 male 142
```

Linear model

▶ Linear model

```
xmdl = lm(pitch \sim sex, my.df)
summary(xmdl)
##
## Call:
## lm(formula = pitch ~ sex, data = my.df)
##
## Residuals:
               2 3
##
## 6.667 -22.333 15.667 2.000 -16.000 14.000
##
  Coefficients:
              Estimate Std. Error t value Pr(>|t|)
##
## (Intercept) 226.33
                           10.18 22.224 2.43e-05 ***
  sexmale -98.33
                           14.40 -6.827 0.00241 **
```