

# lm

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## Contents

lm

1

lm

reference:

- McElreath, Statistical Rethinking, chap 5, pp.119-164

## lm

```
library(rethinking)
library(ggplot2)
library(cowplot)
theme_set(theme_gray())

### R code 5.56
# m5.17 <- lm( y ~ 1 + x , data=d )
# m5.18 <- lm( y ~ 1 + x + z + w , data=d )
#
### R code 5.57
# m5.17 <- lm( y ~ 1 + x , data=d )
# m5.19 <- lm( y ~ x , data=d )
#
### R code 5.58
# m5.20 <- lm( y ~ 0 + x , data=d )
# m5.21 <- lm( y ~ x - 1 , data=d )
#
### R code 5.59
# m5.22 <- lm( y ~ 1 + as.factor(season) , data=d )
#
### R code 5.60
# d$x2 <- d$x^2
# d$x3 <- d$x^3
# m5.23 <- lm( y ~ 1 + x + x2 + x3 , data=d )
#
### R code 5.61
# m5.24 <- lm( y ~ 1 + x + I(x^2) + I(x^3) , data=d )

## R code 5.62
data(cars)
glimmer( dist ~ speed , data=cars )

## alist(
##   dist ~ dnorm( mu , sigma ),
##   mu <- Intercept +
```

```
##      b_speed*speed,  
##      Intercept ~ dnorm(0,10),  
##      b_speed ~ dnorm(0,10),  
##      sigma ~ dcauchy(0,2)  
## )
```