

Carseats Practice

Predict Sales using Price, Urban, and US.

```
library(stargazer)
```

```
##
```

```
## Please cite as:
```

```
## Hlavac, Marek (2018). stargazer: Well-Formatted Regression and Summary Statistics Tables.
```

```
## R package version 5.2.2. https://CRAN.R-project.org/package=stargazer
```

```
load("Carseats.rda")
```

```
lm1 = lm(Sales ~ Price + as.factor(Urban) + as.factor(US), Carseats)
stargazer(lm1, type='text')
```

```
##
```

```
## =====
```

```
## Dependent variable:
```

```
## -----
```

```
## Sales
```

```
## -----
```

```
## Price -0.054***
## (0.005)
```

```
## as.factor(Urban)Yes -0.022
## (0.272)
```

```
## as.factor(US)Yes 1.201***
## (0.259)
```

```
## Constant 13.043***
## (0.651)
```

```
## -----
```

```
## Observations 400
```

```
## R2 0.239
```

```
## Adjusted R2 0.234
```

```
## Residual Std. Error 2.472 (df = 396)
```

```
## F Statistic 41.519*** (df = 3; 396)
```

```
## =====
```

```
## Note: *p<0.1; **p<0.05; ***p<0.01
```

Interpretation of each coefficient: When Price increases by 1 unit, Sales decreases by -0.054. When the observation is in urban area, Sales decreases by -0.022. When the observation is in US, Sales increases by 1.201.

Equation form: $\text{Sales} = \beta_0 + \beta_1 * \text{Price} + \beta_2 * \text{Urban} + \beta_3 * \text{US} + \text{error}$

Only uses the predictors for which there is evidence of association with the outcome:

```
lm2 = lm(Sales ~ Price + as.factor(US), Carseats)
stargazer(lm2, type='text')
```

```
##
## =====
##                      Dependent variable:
##                      -----
##                      Sales
## -----
## Price                -0.054***
##                      (0.005)
##
## as.factor(US)Yes      1.200***
##                      (0.258)
##
## Constant              13.031***
##                      (0.631)
##
## -----
## Observations          400
## R2                    0.239
## Adjusted R2           0.235
## Residual Std. Error   2.469 (df = 397)
## F Statistic            62.431*** (df = 2; 397)
## =====
## Note:                  *p<0.1; **p<0.05; ***p<0.01
```

The two models have the same R-squared and fit the data equally well.

```
confint(lm2)
```

```
##                2.5 %    97.5 %
## (Intercept)    11.79032020 14.27126531
## Price          -0.06475984 -0.04419543
## as.factor(US)Yes 0.69151957 1.70776632
```