

Lab 5

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R Lab 5

```
library(tidyverse)

## -- Attaching packages ---- tidyverse 1.3.0 --

## v ggplot2 3.3.2      v purrr  0.3.4
## v tibble  3.0.3      v dplyr  1.0.2
## v tidyr   1.1.2      v stringr 1.4.0
## v readr   1.3.1      v forcats 0.5.0

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()

C = read.table(url("http://statweb.lsu.edu/EXSTWeb/StatLab/DataSets/NKNWData/CH01PR20.txt"))
# head(C)

attach(C)
number_of_copier=V2; service_time=V1;
reg = lm(service_time ~ number_of_copier)
# Rename variables
# Fit a regression model of Y on X

summary(reg)

##
## Call:
## lm(formula = service_time ~ number_of_copier)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -7.6309 -3.2500 -0.2383  4.0235  6.6309
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -2.3221     2.5644  -0.906   0.379
## number_of_copier 14.7383     0.5193  28.383 4.1e-15 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 4.482 on 16 degrees of freedom
## Multiple R-squared:  0.9805, Adjusted R-squared:  0.9793
## F-statistic: 805.6 on 1 and 16 DF,  p-value: 4.097e-15
```

```
names(reg)
```

```
## [1] "coefficients" "residuals"      "effects"      "rank"
## [5] "fitted.values" "assign"          "qr"           "df.residual"
## [9] "xlevels"       "call"           "terms"        "model"
```

```
reg$coefficients
```

```
##      (Intercept) number_of_copier
##      -2.322148      14.738255
```

```
confint(reg)
```

```
##              2.5 %    97.5 %
## (Intercept)   -7.758337  3.114041
## number_of_copier 13.637480 15.839030
```