Project 1

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Abstract

this is an abstract

1 Linear Regression fit

This is a demo for including R code in an knitr document. This model was given by (Breiman, 1996). And also by (Yang et al., 2017). He can also be referred to as (Breiman, 1999).

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$$y = \beta_0 + \beta_1 * X_1 + \epsilon \tag{1}$$

```
##
## Call:
## lm(formula = mpg ~ ., data = mtcars)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -3.4506 -1.6044 -0.1196  1.2193  4.6271
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 12.30337   18.71788   0.657   0.5181
## cyl         -0.11144    1.04502  -0.107   0.9161
## disp         0.01334    0.01786   0.747   0.4635
## hp          -0.02148    0.02177  -0.987   0.3350
## drat         0.78711    1.63537   0.481   0.6353
## wt          -3.71530    1.89441  -1.961   0.0633 .
## qsec         0.82104    0.73084   1.123   0.2739
## vs           0.31776    2.10451   0.151   0.8814
## am           2.52023    2.05665   1.225   0.2340
```

```
## gear         0.65541    1.49326   0.439   0.6652
## carb        -0.19942    0.82875  -0.241   0.8122
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 2.65 on 21 degrees of freedom
## Multiple R-squared:  0.869,Adjusted R-squared:  0.8066
## F-statistic: 13.93 on 10 and 21 DF,  p-value: 3.793e-07
```

	Model 1
(Intercept)	12.30
	(18.72)
cyl	−0.11
	(1.05)
disp	0.01
	(0.02)
hp	−0.02
	(0.02)
drat	0.79
	(1.64)
wt	−3.72
	(1.89)
qsec	0.82
	(0.73)
vs	0.32
	(2.10)
am	2.52
	(2.06)
gear	0.66
	(1.49)
carb	−0.20
	(0.83)
R^2	0.87
Adj. R^2	0.81
Num. obs.	32
RMSE	2.65

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 1: Statistical models

```
texreg::texreg(fit)
```

References

Breiman, L. (1996). Bagging predictors. *Machine learning*, 24(2):123–140.

Breiman, L. (1999). Prediction games and arcing algorithms. *Neural computation*, 11(7):1493–1517.

Yang, Y., Qian, W., and Zou, H. (2017). Insurance premium prediction via gradient tree-boosted tweedie compound poisson models. *Journal of Business & Economic Statistics*, pages 1–15.