

example?

;

to linear regression

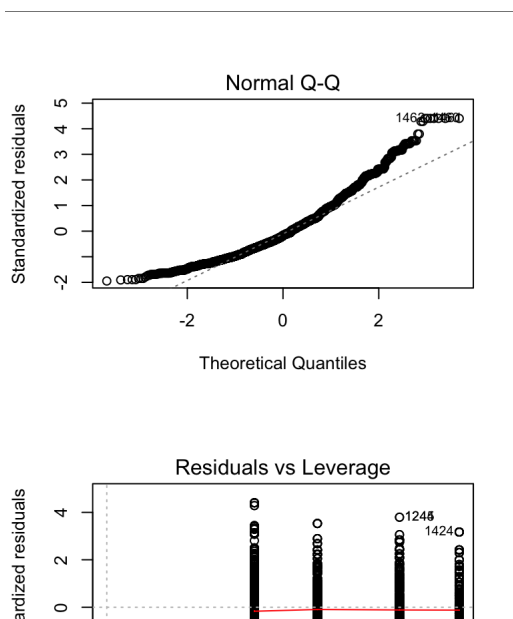
cept + group intercept + residual

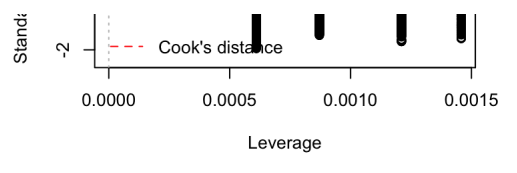
MODEL IN R

```
data = data_set)
```

```
s?
```

3 A FITTED MODEL

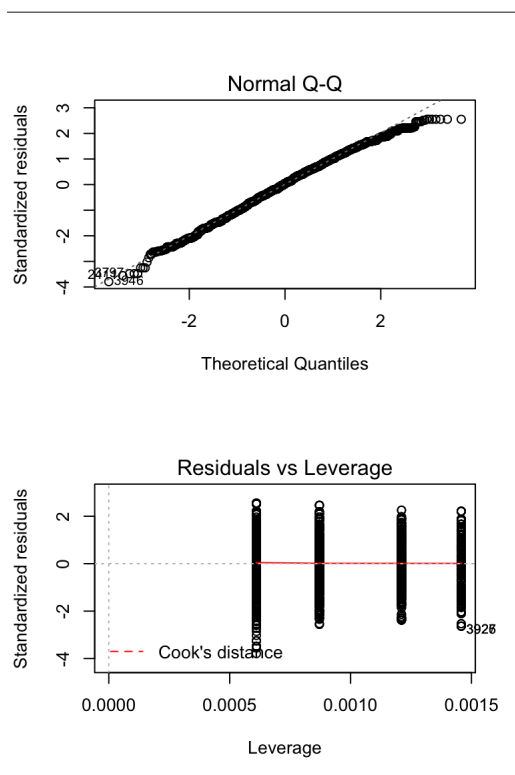




MODEL IN R

```
data  
tor, data = data_set)  
s?
```

3 A FITTED MODEL



TING A FITTED

```
n) ~ mountain_range)
```

```
      3Q      Max  
.32208 1.18833
```

```
te Std. Error t value Pr(>|t|)    1  
71    0.01375 332.777 < 2e-16  
17    0.02248   3.433 0.0006  
31    0.01793   9.165 < 2e-16  
55    0.02125  10.237 < 2e-16
```

```
***' 0.01 '*' 0.05 '.' 0.1
```

```
58 on 4294 degrees of freedom  
Adjusted R-squared: 0.0  
294 DF, p-value: < 2.2e-16
```

TING A FITTED

alues. . .

ut not universally

ts for specific hypotheses

NG A FITTED

(assumptions,

ata? (diagnostics, r^2)

7 meaningful? (p-values,

eaningful? (parameter

PREDICTOR WITH

still an ANOVA)

```
or, data = data_set)
```

```
n
alue = 2.446e-05
difference in means is not e
l:

oup West
124.7842
```

MODELS

VA, t-test: they're all the

up for discrete predictors

J

§ THIS WORK?

or O

this is one reason R has

```
or)
```

```
geShoshone mountain_rangeToi
      0
      1
      0
      0
      0
```

PREDICTOR

the \mathbf{x}_i values don't have to

$(x_{i,3})$

PREDICTOR

redictor2 + predictor3)

redictor2	redictor3
78.99	20.8
67.31	17.1
64.27	16.7
144.02	15.8
235.46	6.2

PREDICTOR

s matters

continuous predictors

```
ors  
rs)
```

```
redictor3  
.00678496  
.32702139  
.25353344  
.08818554  
.67552534
```

DISCRETE

and discrete predictors in

```
+ continuous2 + discrete)
```

continuous2	discrete1	discrete2
78.99	0	
67.31	1	
64.27	0	
144.02	0	
235.46	0	

TORS: NEW

is as before

umed to be

icollinearity

hly correlated the model

careful predictor choice,
ictors

[TY IN R

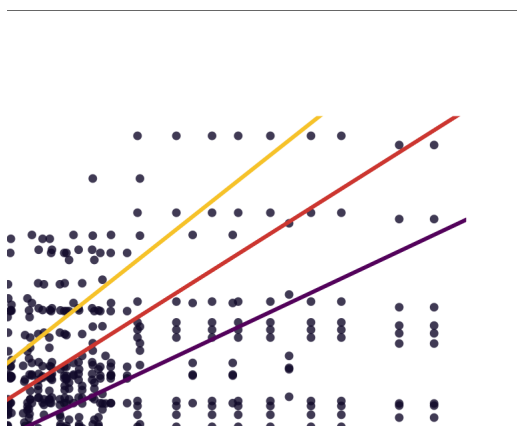
2)

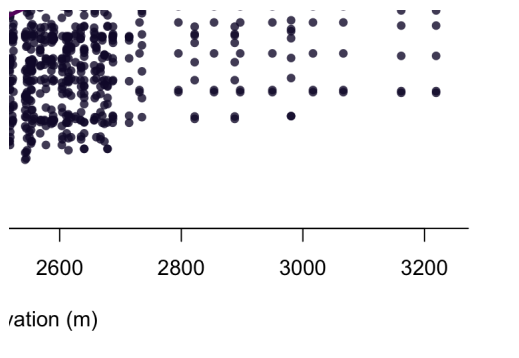
or2	predictor3	predictor4
.34	0.43	-0.53
.00	0.20	-0.22
.20	1.00	-0.52
.22	-0.52	1.00

les until none are highly

or4 is a good option here

TORS:





TORS:

```
ion * mountain_range)
```

```
elevation * mountain_range)
```

```
3Q      Max
03  202.73
```

```
      Estimate Std. Error t
-2.104e+02  3.185e+01 -
  1.364e-01  1.366e-02
  1.842e+01  4.067e+01
```

```

          9.473e+01  3.346e+01
          1.798e+01  4.192e+01
one -3.521e-03  1.747e-02  -
be  -3.089e-02  1.435e-02  -
ma  -2.771e-03  1.767e-02  -

'***' 0.01 '*' 0.05 '.' 0.1

2 on 4290 degrees of freedom
Adjusted R-squared: 0.2083
290 DF, p-value: < 2.2e-16

```

TORS:

efficients

s on value of the other

both are continuous

higher-order interactions

o interpret

