



Start-Tech Academy

Logistic Regression

Result

Result summary

```
Coefficients:
              Estimate Std. Error z value Pr(>|z|)
 $\beta_0$ (Intercept)  0.61486    0.24751   2.484 0.012986 *
 $\beta_1$ price      -0.03572    0.01045  -3.417 0.000632 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

- If β is zero, it means there is no relationship

Ho : There is no relationship between X and Y

Ha : There is some relationship between X and Y

H : $\beta_1 = 0$

Ha : $\beta_1 \neq 0$,

Logistic Regression

Limitations

- To disapprove H_0 , we calculate Z statistics $Z = \frac{\hat{\beta}_1 - 0}{SE(\hat{\beta}_1)}$
- We also compute the probability of observing any value equal to $|z|$ or larger
- We call this probability the *p-value*
- A small p-value means there is an association between the predictor and the response (typically less than 5% or 1 %)

Key Takeaway

P value should be less than 0.05 (Threshold) to establish relationship

