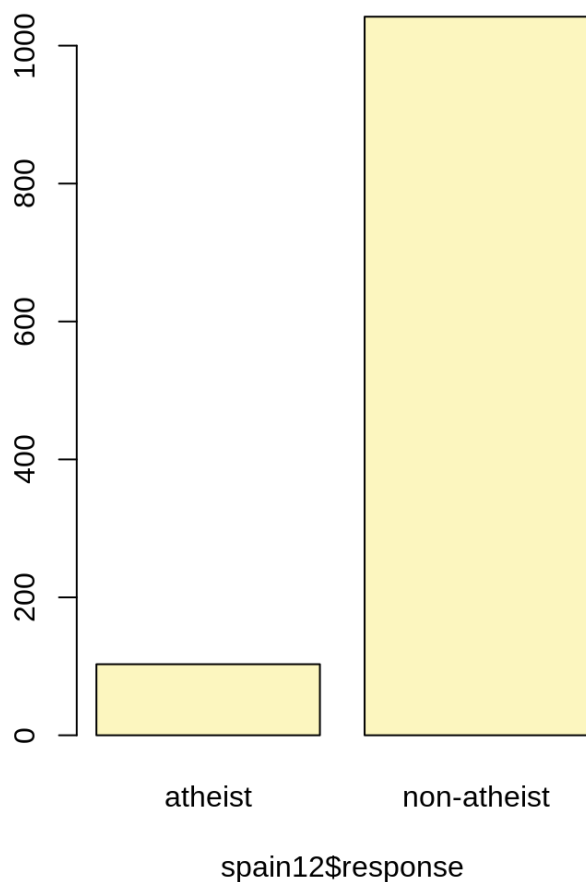# ex-06.r

naelsondouglas

Sun Sep 23 22:54:04 2018

```
download.file("http://www.openintro.org/stat/data/atheism.RData", destfile =
"atheism.RData")
load("atheism.RData")

print("Questão 1")
```

```
## [1] "Questão 1"
```

```
spain05 <- subset(atheism, nationality == "Spain" & year == "2005")

spain12 <- subset(atheism, nationality == "Spain" & year == "2012")

inference(spain12$response, est = "proportion", type = "ci", method = "theor
etical", success = "atheist", conf = 0.95)
```
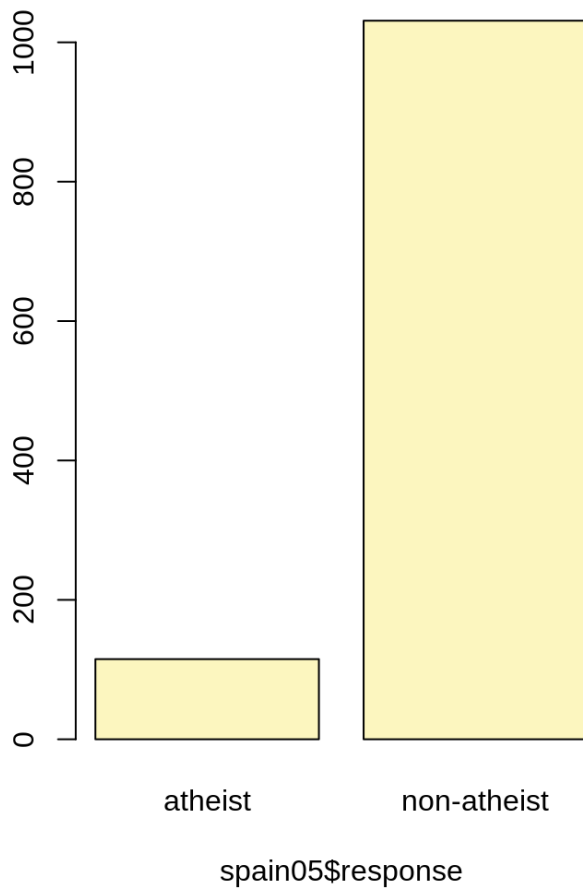
```
## Single proportion -- success: atheist
## Summary statistics:
```

spain12$response

```
## p_hat = 0.09 ;  n = 1145
## Check conditions: number of successes = 103 ; number of failures = 1042
## Standard error = 0.0085
## 95 % Confidence interval = ( 0.0734 , 0.1065 )
```

```
inference(spain05$response, est = "proportion", type = "ci", method = "theor
etical", success = "atheist", conf = 0.95)
```

```
## Single proportion -- success: atheist
## Summary statistics:
```

spain05$response

```
## p_hat = 0.1003 ;   n = 1146
## Check conditions: number of successes = 115 ; number of failures = 1031
## Standard error = 0.0089
## 95 % Confidence interval = ( 0.083 , 0.1177 )
```

```
print("Os intervalos de confiança se cruzam, logo não há evidências para rej
eitar a hipótese nula.")
```
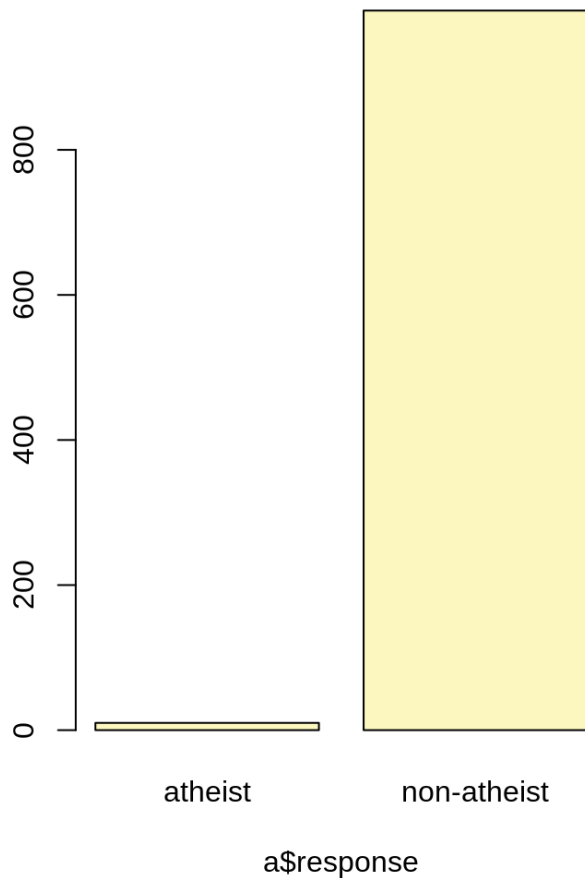
```
## [1] "Os intervalos de confiança se cruzam, logo não há evidências para re
jeitar a hipótese nula."
```

```
print("1 - B")
```

```
## [1] "1 - B"
```

```
a <-subset(atheism, nationality == "United States" & year == "2005")
b <-subset(atheism, nationality == "United States" & year == "2012")
inference(a$response, type = "ci",est = "proportion",  method = "theoretical
", success = "atheist", conf = 0.95)
```

```
## Single proportion -- success: atheist
## Summary statistics:
```


a$response

```
## p_hat = 0.01 ;  n = 1002
## Check conditions: number of successes = 10 ; number of failures = 992
## Standard error = 0.0031
## 95 % Confidence interval = ( 0.0038 , 0.0161 )
```

```
print("Sem sobreposição de intervalos, logo há evidências contra a hipótese
nula.")
```

```
## [1] "Sem sobreposição de intervalos, logo há evidências contra a hipótese
nula."
```