统计计算

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参考

- R 语言高级编程
- R 语言数据科学
- R 语言数据可视化
- R 包开发

1. 矩阵计算

1.1 矩阵乘法

```{r}
a <- c(1, -1, 1, -1, -3, -3, 1, -3, 0) |> matrix(byrow = T, nrow = 3)
c <- c(1, 1, -3 / 2, 0, 1, -1 / 2, 0, 0, 1) |> matrix(byrow = T, nrow = 3)
q <- t(c) %*% a %*% c
```

1.2 矩阵求逆

1.3 矩阵特征值

```{r}
eigen(q)
```

```
eigen() decomposition
$values
[1]  1  0 -4

$vectors
     [,1] [,2] [,3]
[1,]    1    0    0
[2,]    0    0    1
[3,]    0    1    0
```

2. 高级 R

```{r}
library(tidyverse, quietly = true, warn.conflicts = false)
library(knitr, quietly = true)
library(rsthemes, quietly = true)
library(conflicted, quietly = true)
library(easystats, quietly = true)
library(autoReg, quietly = true)
library(lubridate, quietly = true)
library(ggplot2, quietly = true)
library(scales, quietly = true)
library(ggthemr, quietly = true)
conflicts_prefer(dplyr::filter)
ggthemr(palette = "pale")
```