

Source on Save

```

1
2 library(rmutil)
3
4 n = 1000
5 M = 100
6
7 res = matrix(data = NA, ncol = 4, nrow = M)
8 for (i in (1:M)) {
9   laplaceVector = rlaplace(n, m = 10, s = 23)
10  mLikelyhood = median(laplaceVector)
11  sigmaLikelyhood = sum(abs(laplaceVector - mLikelyhood)) / n
12  mMoment = mean(laplaceVector)
13  sigmaMoment = sqrt(var(laplaceVector) / 2)
14  res[i, 1] = mLikelyhood
15  res[i, 2] = mMoment
16
17  res[i, 3] = sigmaLikelyhood
18  res[i, 4] = sigmaMoment
19 }
20
21 boxplot(res, col="green", names=c("mLike", "mMoment", "sLike", "sMoment"))
22 grid()
23

```

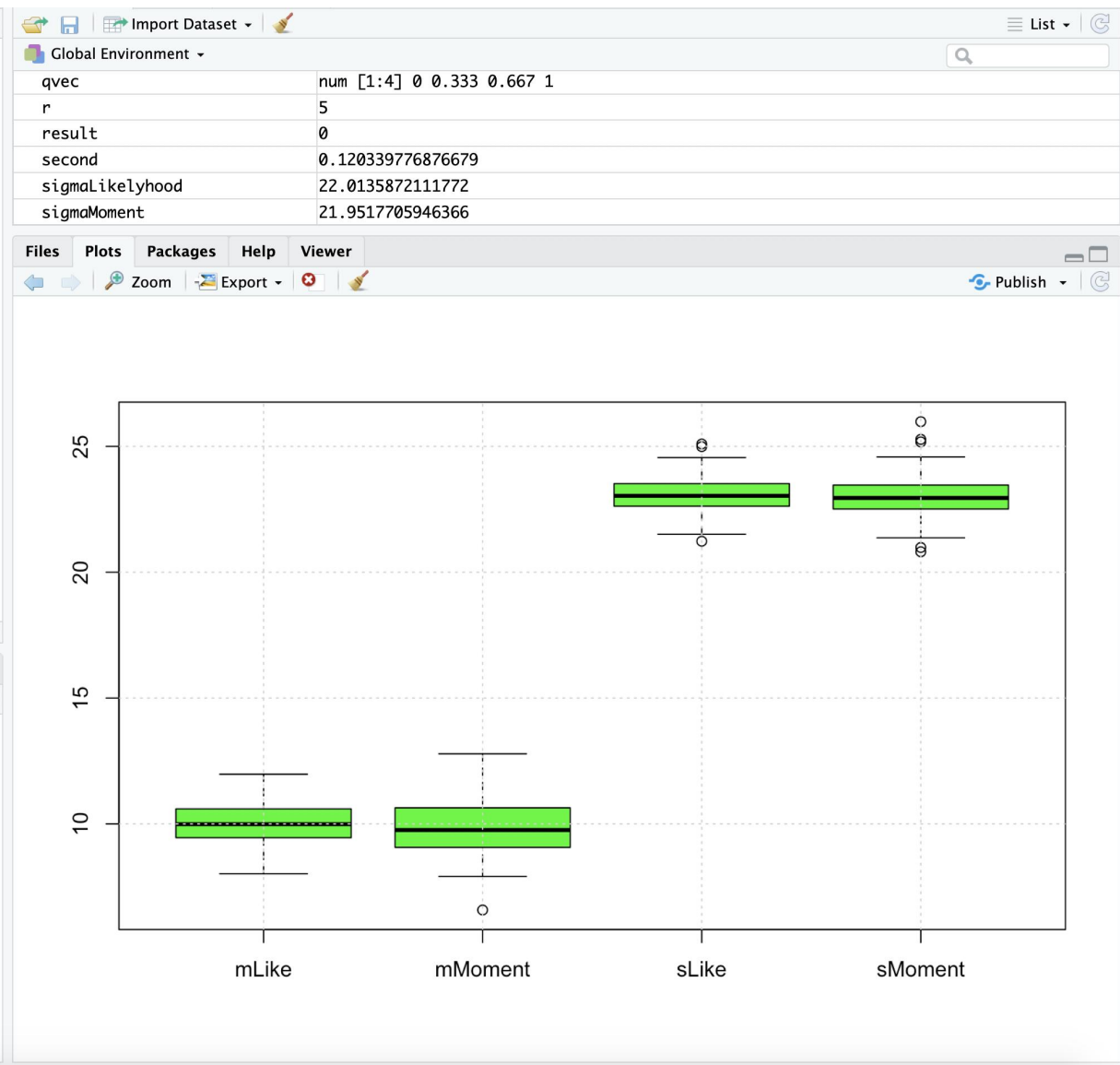
11:40 (Top Level) R Script

Console Terminal

```

+ laplaceVector = rlaplace(n, m = 10, s = 23)
+ mLikelyhood = median(laplaceVector)
+ sigmaLikelyhood = sum(abs(laplaceVector - mLikelyhood)) / n
+ mMoment = mean(laplaceVector)
+ sigmaMoment = sqrt(var(laplaceVector) / 2)
+ res[i, 1] = mLikelyhood
+ res[i, 2] = mMoment
+
+ res[i, 3] = sigmaLikelyhood
+ res[i, 4] = sigmaMoment
+ }
>
> boxplot(res, col="green", names=c("mLike", "mMoment", "sLike", "sMoment"))
> grid()
>

```



Go to file/function Addins

OZON_MAT_STAT_SEM1.R × S1_2020.R × Task 3 Laplas.R ×

Source on Save Run Source

```

1
2 library(rmutil)
3
4 n = 100
5 M = 100
6
7 res = matrix(data = NA, ncol = 4, nrow = M)
8 for (i in (1:M)) {
9   laplaceVector = rlaplace(n, m = 10, s = 23)
10  mLikelyhood = median(laplaceVector)
11  sigmaLikelyhood = sum(abs(laplaceVector - mLikelyhood)) / n
12  mMoment = mean(laplaceVector)
13  sigmaMoment = sqrt(var(laplaceVector) / 2)
14  res[i, 1] = mLikelyhood
15  res[i, 2] = mMoment
16
17   res[i, 3] = sigmaLikelyhood
18   res[i, 4] = sigmaMoment
19 }
20
21 boxplot(res, col="green", names=c("mLike", "mMoment", "sLike", "sMoment"))
22 grid()
23

```

4:8 (Top Level) R Script

Console Terminal

```

+ laplaceVector = rlaplace(n, m = 10, s = 23)
+ mLikelyhood = median(laplaceVector)
+ sigmaLikelyhood = sum(abs(laplaceVector - mLikelyhood)) / n
+ mMoment = mean(laplaceVector)
+ sigmaMoment = sqrt(var(laplaceVector) / 2)
+ res[i, 1] = mLikelyhood
+ res[i, 2] = mMoment
+
+ res[i, 3] = sigmaLikelyhood
+ res[i, 4] = sigmaMoment
+ }
+
> boxplot(res, col="green", names=c("mLike", "mMoment", "sLike", "sMoment"))
> grid()
>

```

Project: (None)

Environment History Connections

Import Dataset

Global Environment

qvec	num [1:4] 0 0.333 0.667 1
r	5
result	0
second	0.120339776876679
sigmaLikelyhood	21.3852172309313
sigmaMoment	20.1877982862791

Files Plots Packages Help Viewer

Zoom Export

Publish

Boxplot showing the distribution of four variables: mLike, mMoment, sLike, and sMoment. The y-axis ranges from 5 to 30. mLike and mMoment have medians around 10, while sLike and sMoment have medians around 23. All variables show outliers.

Variable	Median	Q1	Q3	Min	Max	Outliers
mLike	~10	~8	~12	~4	~17	~18.5
mMoment	~10	~8	~12	~3	~16	~18.5
sLike	~23	~21	~25	~17	~28	~29.5
sMoment	~23	~21	~25	~16	~28	~29.5