



Daten Visualisieren in R

[Termin 3]

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Daten Importieren

Aus Textdateien

- `readLines()`
- `read.table()`
 - `read.csv()`
 - `read.csv2()`

Siehe in [R Data Import/Export](#)

Aus SPSS

- Paket `haven`
 - `read_sav()`

Aus MS Excel

- Paket `openxlsx`
 - `read.xlsx()`
 - `readWorkbook()`
 - `loadWorkbook()`

Aus LibreOffice Calc

- Paket `readODS`
 - `read_ods()`



Visualisierung

Zwei Pakete zur Auswahl:

graphics	ggplot2
Organisiert in high-level und low-level-functions Elementen werden “per Hand” addiert	Organisiert in Schichten Elementen werden automatisch (in Themen) editiert
Einfacher Einstieg für Anfänger Dieses Paket ist in der Grundinstallation von R beinhaltet	Schwerer zu lernen Man muss ggplot2 zusätzlich installieren
Graphiken im aktiven graphischen Device	Graphiken als Plot-Objekten

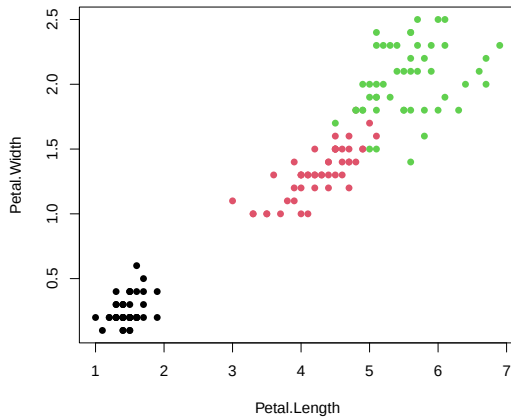
Schaue in [The R Graph Gallery](#) rein



Paket graphics

Streudiagramm

```
plot(Petal.Width ~ Petal.Length, data = iris,  
     col = iris$Species, pch = 16)
```

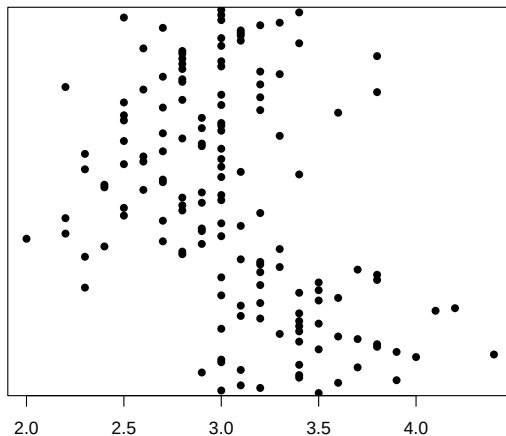




Paket graphics

Cleveland Dot Plot

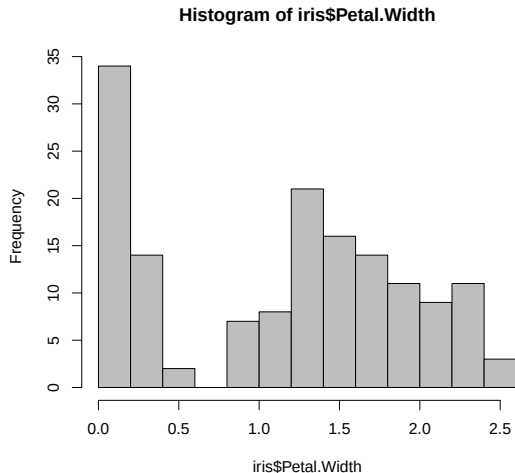
```
dotchart(iris$Sepal.Width, pch = 16,  
         lcolor = NA)
```





Histogram

```
hist(iris$Petal.Width, col = "grey")
```

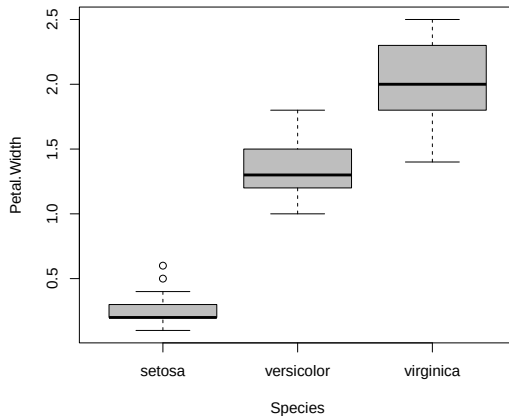




Paket graphics

Box-Plot

```
boxplot(Petal.Width ~ Species,  
        data = iris, col = "grey")
```

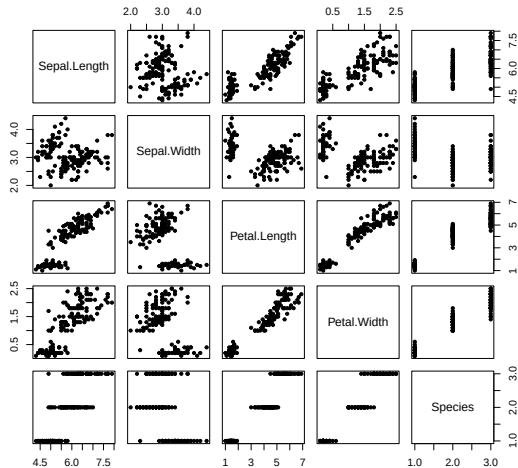




Paket graphics

Streudiagramm-Matrix

```
pairs(iris, pch = 20)
```



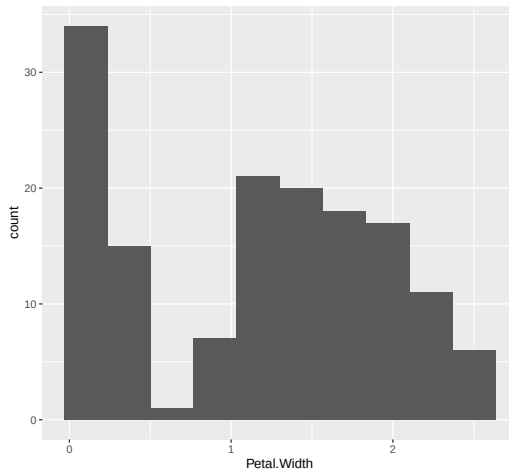


Paket ggplot2

Histogram

```
library(ggplot2)

ggplot(iris, aes(x = Petal.Width)) +  
  geom_histogram(bins = 10)
```

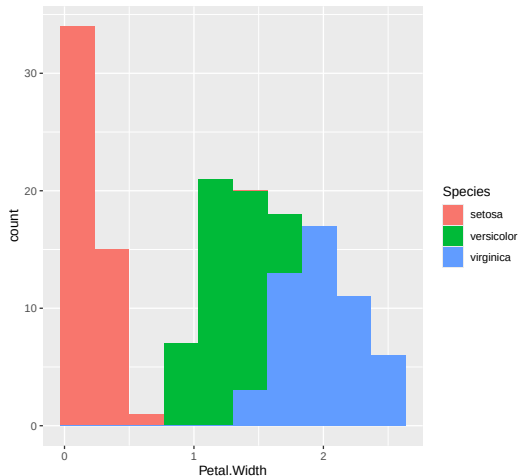




Paket ggplot2

Histogram

```
ggplot(iris, aes(x = Petal.Width,  
  fill = Species)) +  
  geom_histogram(bins = 10)
```

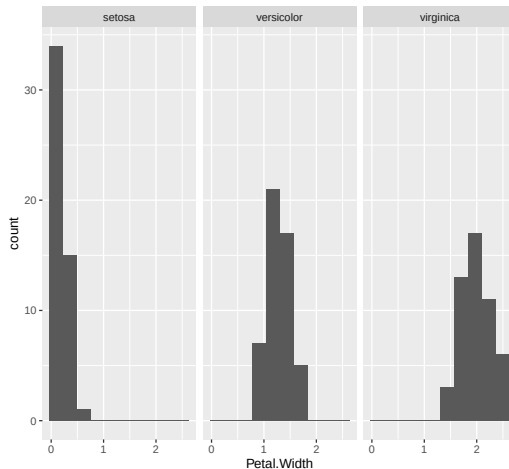




Paket ggplot2

Histogram

```
ggplot(iris, aes(x = Petal.Width)) +  
  geom_histogram(bins = 10) +  
  facet_wrap(~Species)
```

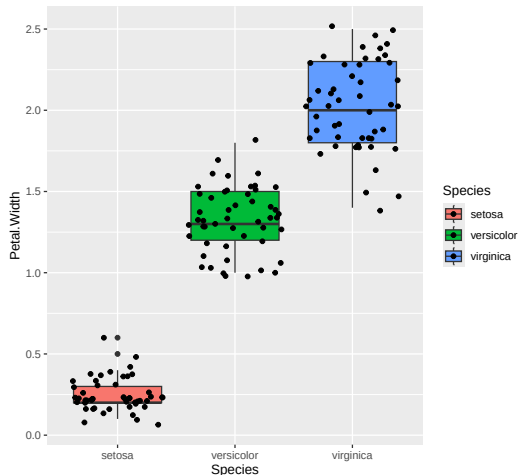




Paket ggplot2

Histogram

```
ggplot(iris, aes(x = Species, y = Petal.Width,  
  fill = Species)) +  
  geom_boxplot() +  
  geom_jitter()
```





Vielen Dank!

```
library(fortunes)
fortune(269)
```

Knut Krueger: Is there any function available to combine those p values?

Stephan Kolassa: ?"+"

- Knut Krueger and Stephan Kolassa (about ways to combine p values from different tests)
R-help (July 2010)