Hypothese5

Silas Nöttling

19 4 2020

Deskriptive Statistik - Einzelflüge

```
## $`Flug: Amsterdam-AUA`
##
##  DESCRIPTIVES
##
##  Descriptives
##  ----------------------------------------
##                          Preis    Cookies
##  ----------------------------------------
##    N                       560        560
##    Missing                   0          0
##    Mean                    396
##    Median                  228
##    Standard deviation      332
##    Minimum                50.0
##    Maximum                1193
##  ----------------------------------------
##
##
##  FREQUENCIES
##
##  Frequencies of Cookies
##  -----------------------------------------------------------
##    Levels         Counts    % of Total    Cumulative %
##  -----------------------------------------------------------
##    Zugelassen        280          50.0            50.0
##    Zurueckgesetzt    280          50.0           100.0
##  -----------------------------------------------------------
##
##
## $`Flug: Berlin-AUA`
##
##  DESCRIPTIVES
##
##  Descriptives
##  ----------------------------------------
##                          Preis    Cookies
##  ----------------------------------------
##    N                       560        560
##    Missing                   0          0
##    Mean                    396
##    Median                  228
##    Standard deviation      332
##    Minimum                50.0
##    Maximum                1193
##  ----------------------------------------
```

```
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   -------------------------------------------------------------
##     Levels            Counts     % of Total     Cumulative %
##   -------------------------------------------------------------
##     Zugelassen          280           50.0             50.0
##     Zurueckgesetzt      280           50.0            100.0
##   -------------------------------------------------------------
##
##
## $`Flug: Lissabon-AUA`
##
##   DESCRIPTIVES
##
##   Descriptives
##   -----------------------------------------
##                            Preis     Cookies
##   -----------------------------------------
##     N                        560         560
##     Missing                    0           0
##     Mean                     396
##     Median                   228
##     Standard deviation       332
##     Minimum                 50.0
##     Maximum                 1193
##   -----------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   -------------------------------------------------------------
##     Levels            Counts     % of Total     Cumulative %
##   -------------------------------------------------------------
##     Zugelassen          280           50.0             50.0
##     Zurueckgesetzt      280           50.0            100.0
##   -------------------------------------------------------------
##
##
## $`Flug: London-AUA`
##
##   DESCRIPTIVES
##
##   Descriptives
##   -----------------------------------------
##                            Preis     Cookies
##   -----------------------------------------
##     N                        560         560
##     Missing                    0           0
##     Mean                     396
##     Median                   228
```

```
##     Standard deviation         332
##     Minimum                  50.0
##     Maximum                  1193
##     ----------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##     ------------------------------------------------------------
##     Levels            Counts    % of Total    Cumulative %
##     ------------------------------------------------------------
##     Zugelassen           280          50.0            50.0
##     Zurueckgesetzt       280          50.0           100.0
##     ------------------------------------------------------------
##
##
## $`Flug: Bangkok-AUA`
##
##   DESCRIPTIVES
##
##   Descriptives
##     ----------------------------------------
##                            Preis     Cookies
##     ----------------------------------------
##     N                        560         560
##     Missing                    0           0
##     Mean                     396
##     Median                   228
##     Standard deviation       332
##     Minimum                 50.0
##     Maximum                 1193
##     ----------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##     ------------------------------------------------------------
##     Levels            Counts    % of Total    Cumulative %
##     ------------------------------------------------------------
##     Zugelassen           280          50.0            50.0
##     Zurueckgesetzt       280          50.0           100.0
##     ------------------------------------------------------------
##
##
## $`Flug: New York-AUA`
##
##   DESCRIPTIVES
##
##   Descriptives
##     ----------------------------------------
##                            Preis     Cookies
##     ----------------------------------------
```

```
##    N                             560          560
##    Missing                         0            0
##    Mean                          396
##    Median                        228
##    Standard deviation            332
##    Minimum                      50.0
##    Maximum                      1193
##   ------------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   ------------------------------------------------------------
##    Levels          Counts    % of Total    Cumulative %
##   ------------------------------------------------------------
##    Zugelassen        280          50.0            50.0
##    Zurueckgesetzt    280          50.0           100.0
##   ------------------------------------------------------------
##
##
## $`Flug: Tokio-AUA`
##
##   DESCRIPTIVES
##
##   Descriptives
##   ------------------------------------------
##                               Preis     Cookies
##   ------------------------------------------
##    N                             560          560
##    Missing                         0            0
##    Mean                          396
##    Median                        228
##    Standard deviation            332
##    Minimum                      50.0
##    Maximum                      1193
##   ------------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   ------------------------------------------------------------
##    Levels          Counts    % of Total    Cumulative %
##   ------------------------------------------------------------
##    Zugelassen        280          50.0            50.0
##    Zurueckgesetzt    280          50.0           100.0
##   ------------------------------------------------------------
##
##
## $`Flug: Amsterdam-KLM`
##
##   DESCRIPTIVES
##
```

```
##  Descriptives
##  -------------------------------------------
##                          Preis    Cookies
##  -------------------------------------------
##    N                       560        560
##    Missing                   0          0
##    Mean                    396
##    Median                  228
##    Standard deviation      332
##    Minimum                50.0
##    Maximum                1193
##  -------------------------------------------
##
##
##  FREQUENCIES
##
##  Frequencies of Cookies
##  -----------------------------------------------------------
##    Levels            Counts    % of Total    Cumulative %
##  -----------------------------------------------------------
##    Zugelassen           280          50.0            50.0
##    Zurueckgesetzt       280          50.0           100.0
##  -----------------------------------------------------------
##
##
##  $`Flug: Berlin-EZY`
##
##  DESCRIPTIVES
##
##  Descriptives
##  -------------------------------------------
##                          Preis    Cookies
##  -------------------------------------------
##    N                       560        560
##    Missing                   0          0
##    Mean                    396
##    Median                  228
##    Standard deviation      332
##    Minimum                50.0
##    Maximum                1193
##  -------------------------------------------
##
##
##  FREQUENCIES
##
##  Frequencies of Cookies
##  -----------------------------------------------------------
##    Levels            Counts    % of Total    Cumulative %
##  -----------------------------------------------------------
##    Zugelassen           280          50.0            50.0
##    Zurueckgesetzt       280          50.0           100.0
##  -----------------------------------------------------------
##
##
```

```
## $`Flug: Lissabon-LDM`
##
##   DESCRIPTIVES
##
##   Descriptives
##   ------------------------------------------
##                            Preis     Cookies
##   ------------------------------------------
##     N                        560         560
##     Missing                    0           0
##     Mean                     396
##     Median                   228
##     Standard deviation       332
##     Minimum                 50.0
##     Maximum                 1193
##   ------------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   ----------------------------------------------------------
##     Levels          Counts     % of Total    Cumulative %
##   ----------------------------------------------------------
##     Zugelassen         280           50.0            50.0
##     Zurueckgesetzt     280           50.0           100.0
##   ----------------------------------------------------------
##
##
## $`Flug: London-BAW`
##
##   DESCRIPTIVES
##
##   Descriptives
##   ------------------------------------------
##                            Preis     Cookies
##   ------------------------------------------
##     N                        560         560
##     Missing                    0           0
##     Mean                     396
##     Median                   228
##     Standard deviation       332
##     Minimum                 50.0
##     Maximum                 1193
##   ------------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   ----------------------------------------------------------
##     Levels          Counts     % of Total    Cumulative %
##   ----------------------------------------------------------
##     Zugelassen         280           50.0            50.0
```

```
##      Zurueckgesetzt        280            50.0              100.0
## ---------------------------------------------------------------
##
##
## $`Flug: Bangkok-THA`
##
##   DESCRIPTIVES
##
##   Descriptives
##   ------------------------------------------
##                            Preis     Cookies
##   ------------------------------------------
##      N                       560         560
##      Missing                   0           0
##      Mean                    396
##      Median                  228
##      Standard deviation      332
##      Minimum                50.0
##      Maximum                1193
##   ------------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   ---------------------------------------------------------------
##      Levels           Counts     % of Total     Cumulative %
##   ---------------------------------------------------------------
##      Zugelassen          280            50.0              50.0
##      Zurueckgesetzt      280            50.0              100.0
##   ---------------------------------------------------------------
##
##
## $`Flug: New York-UAL`
##
##   DESCRIPTIVES
##
##   Descriptives
##   ------------------------------------------
##                            Preis     Cookies
##   ------------------------------------------
##      N                       560         560
##      Missing                   0           0
##      Mean                    396
##      Median                  228
##      Standard deviation      332
##      Minimum                50.0
##      Maximum                1193
##   ------------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
```
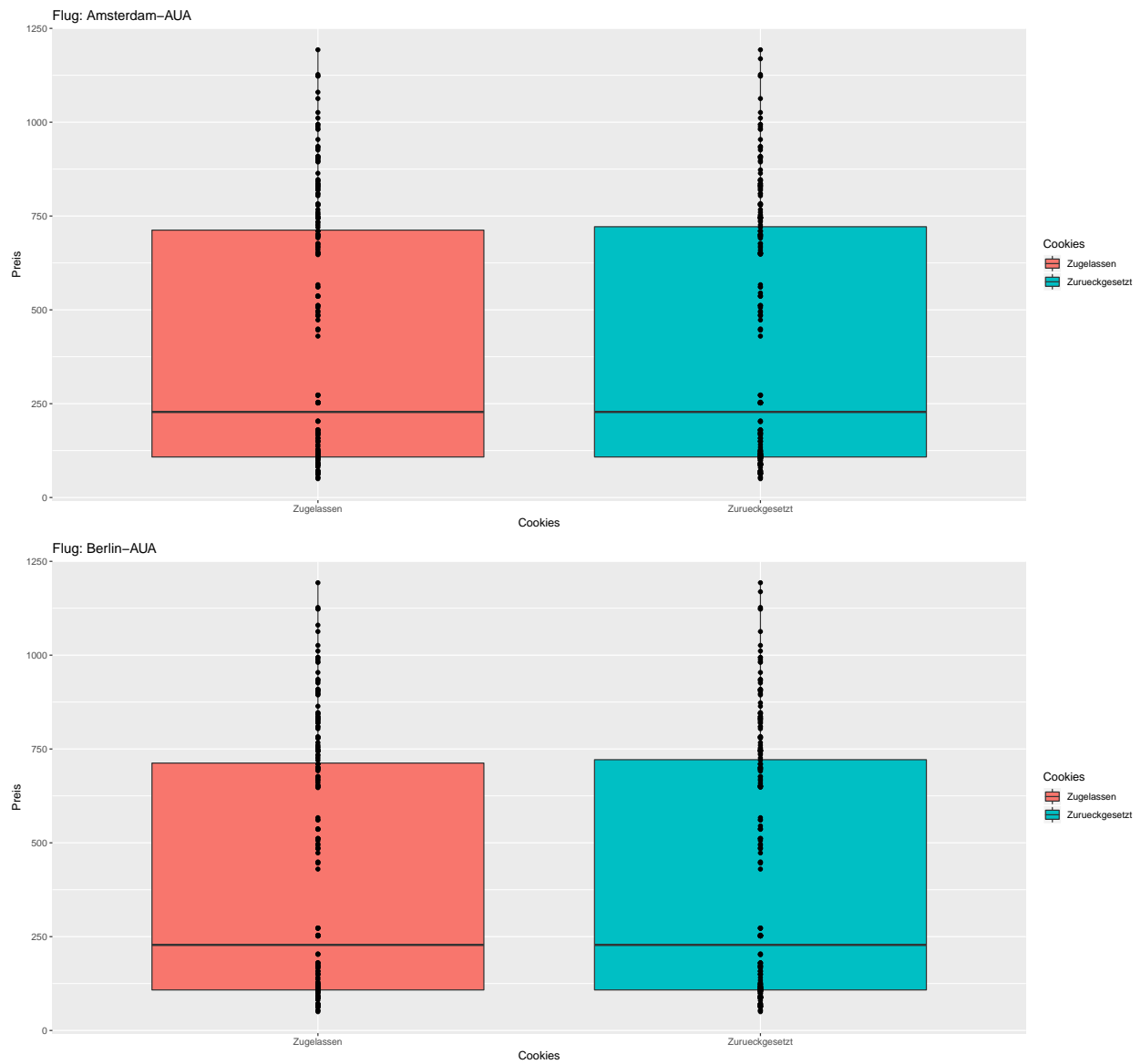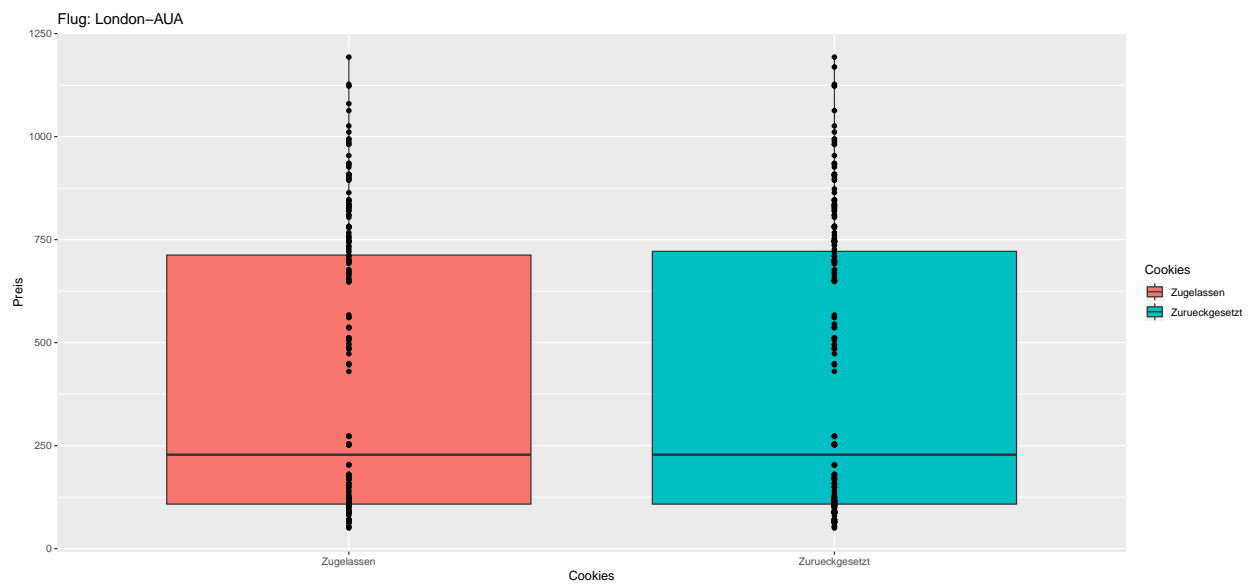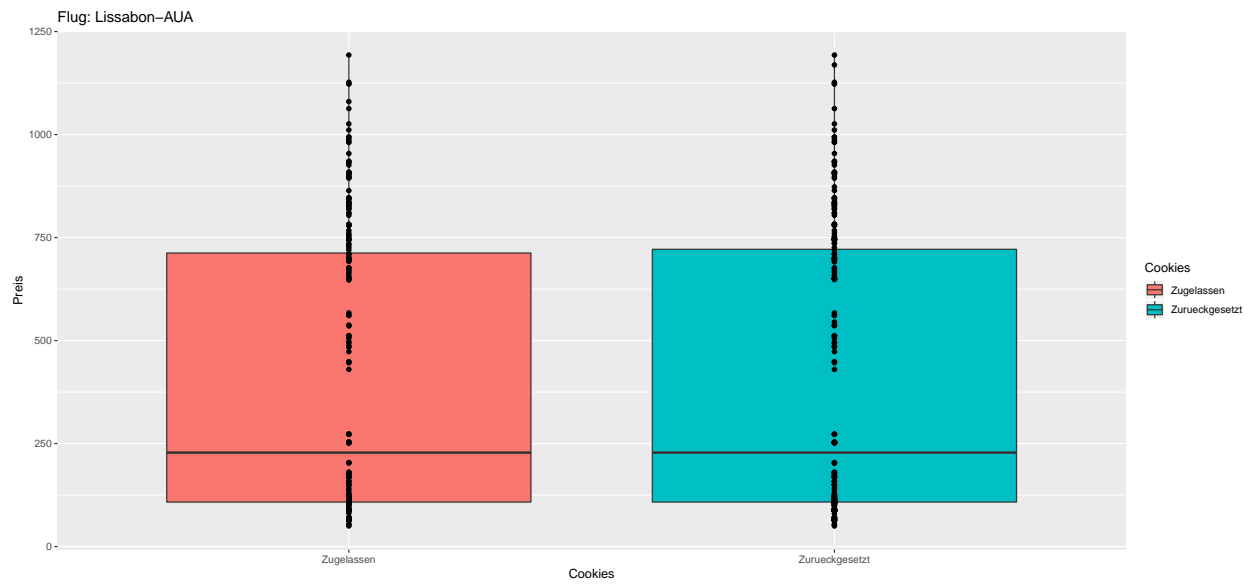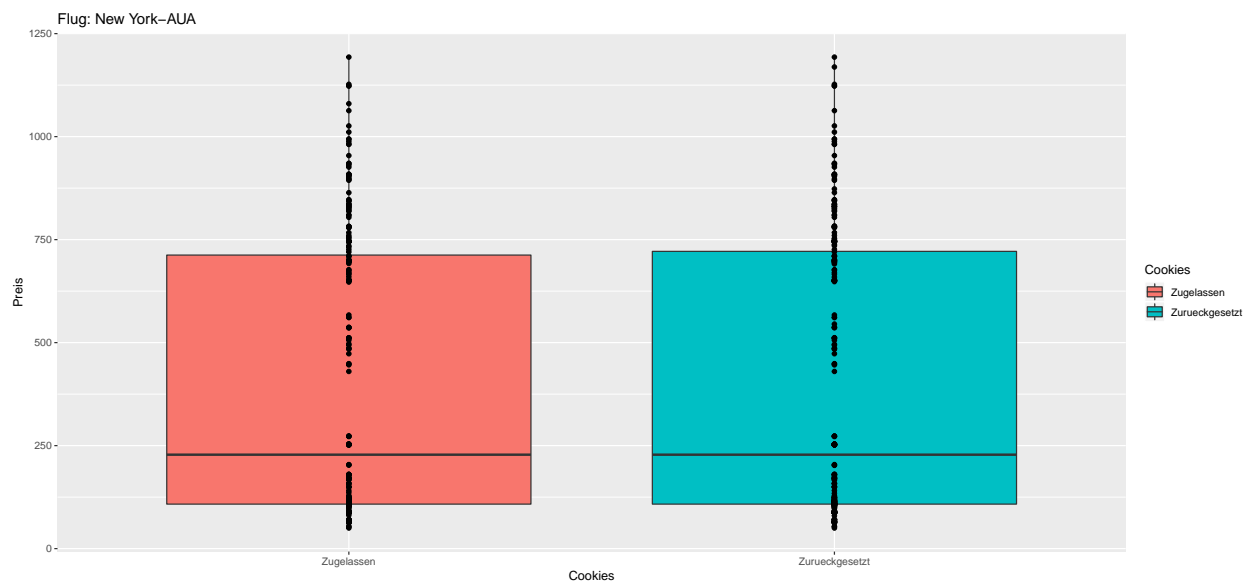
```
##   ----------------------------------------------------------
##     Levels              Counts      % of Total    Cumulative %
##   ----------------------------------------------------------
##     Zugelassen             280            50.0            50.0
##     Zurueckgesetzt         280            50.0           100.0
##   ----------------------------------------------------------
##
##
## $`Flug: Tokio-ANA`
##
##   DESCRIPTIVES
##
##   Descriptives
##   ------------------------------------------
##                            Preis     Cookies
##   ------------------------------------------
##     N                        560         560
##     Missing                    0           0
##     Mean                     396
##     Median                   228
##     Standard deviation       332
##     Minimum                 50.0
##     Maximum                 1193
##   ------------------------------------------
##
##
##   FREQUENCIES
##
##   Frequencies of Cookies
##   ----------------------------------------------------------
##     Levels              Counts      % of Total    Cumulative %
##   ----------------------------------------------------------
##     Zugelassen             280            50.0            50.0
##     Zurueckgesetzt         280            50.0           100.0
##   ----------------------------------------------------------
```
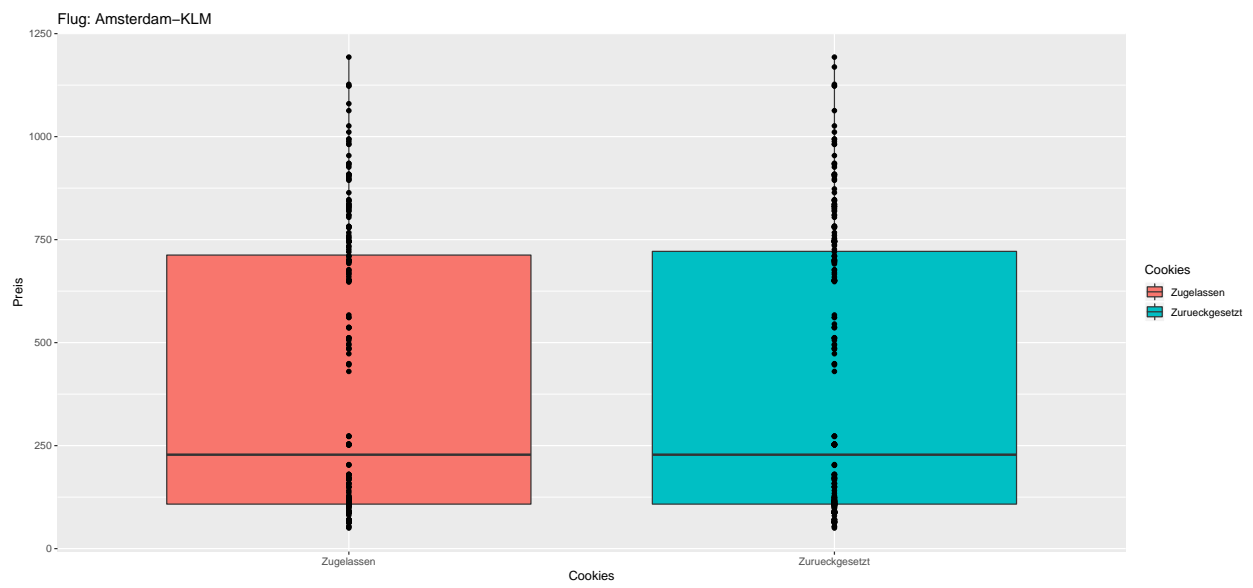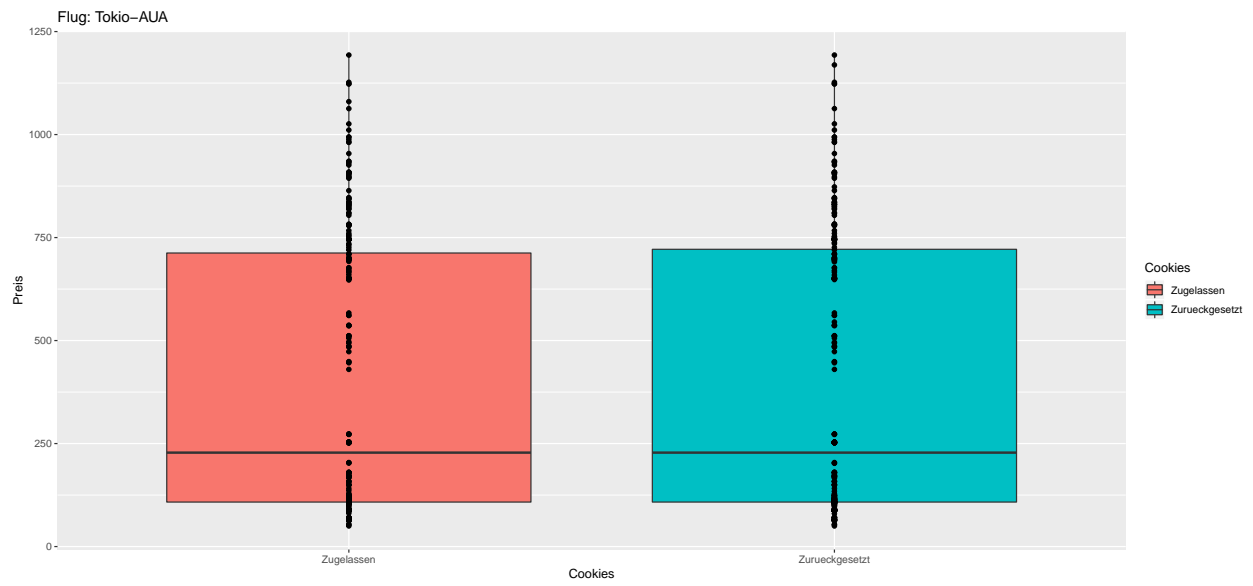
Box-Plot - Einzelflüge

Flug: Amsterdam–AUA

Flug: Berlin–AUA

Flug: Lissabon–AUA

Flug: London–AUA

Flug: Bangkok–AUA

Flug: New York–AUA

Flug: Tokio–AUA

Flug: Amsterdam–KLM

Flug: Berlin–EZY

Flug: Lissabon–LDM

Cookies
Zugelassen
Zurueckgesetzt

Flug: London–BAW

Flug: Bangkok–THA

Flug: New York–UAL

Flug: Tokio–ANA
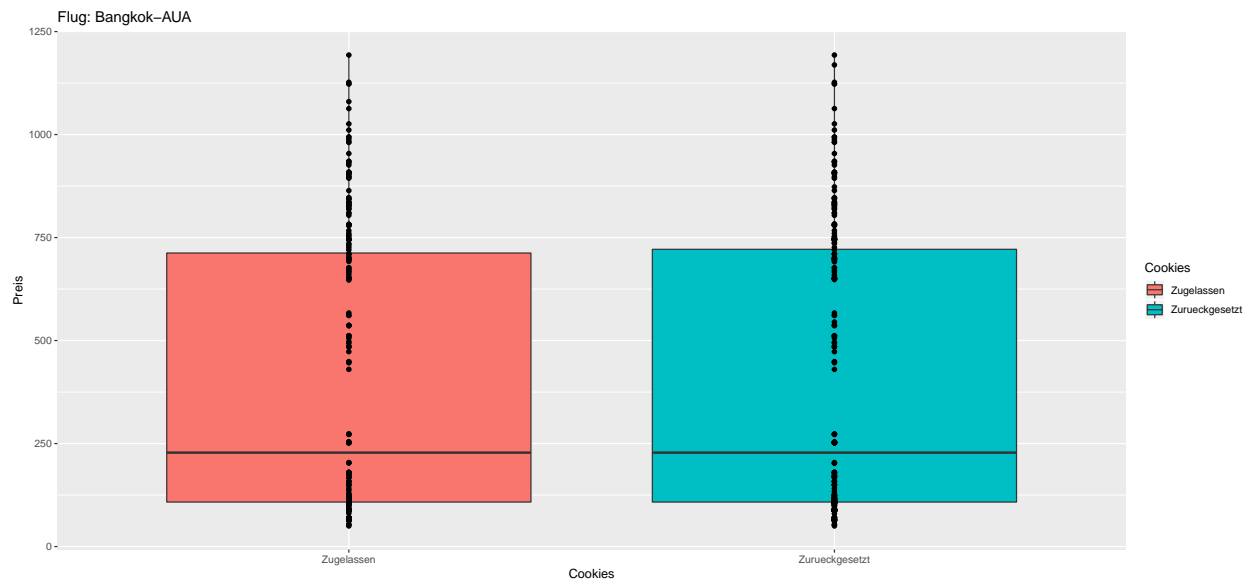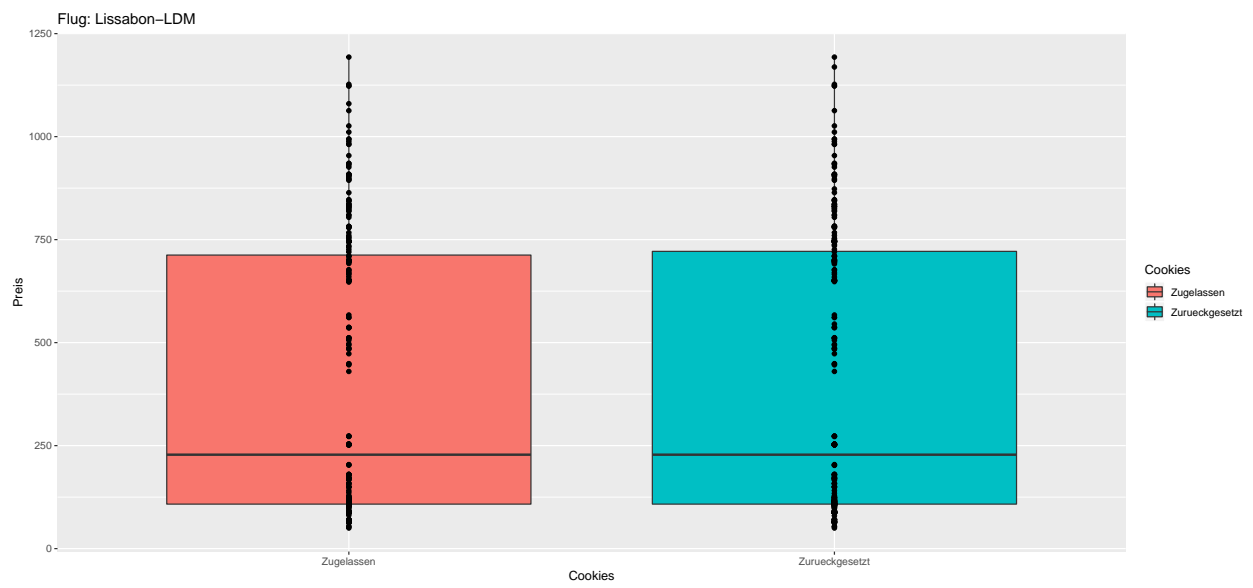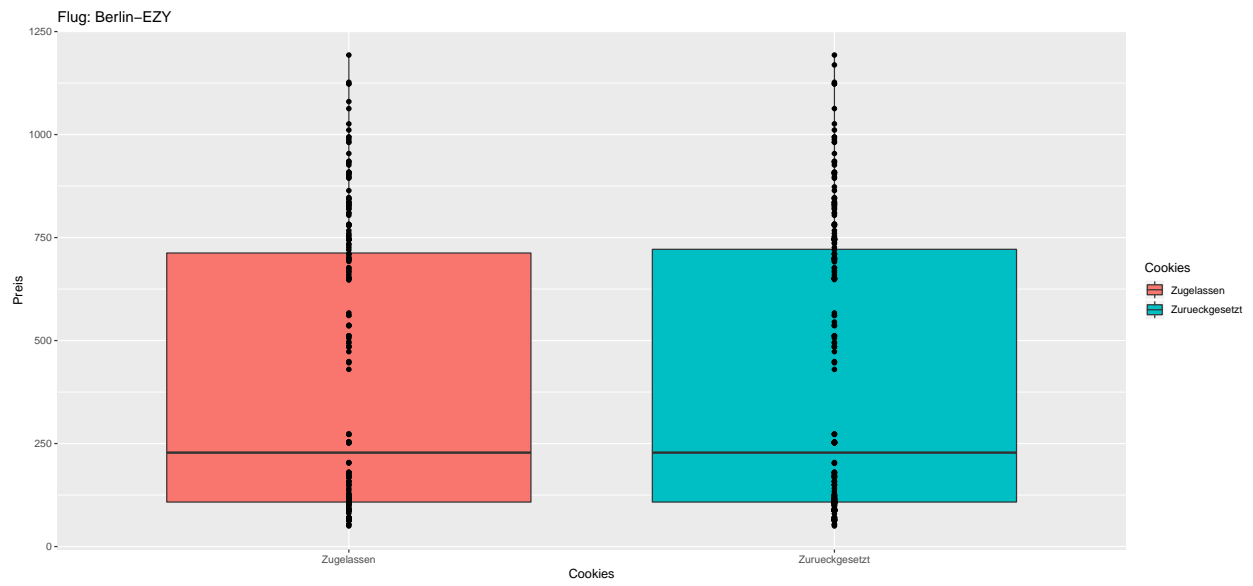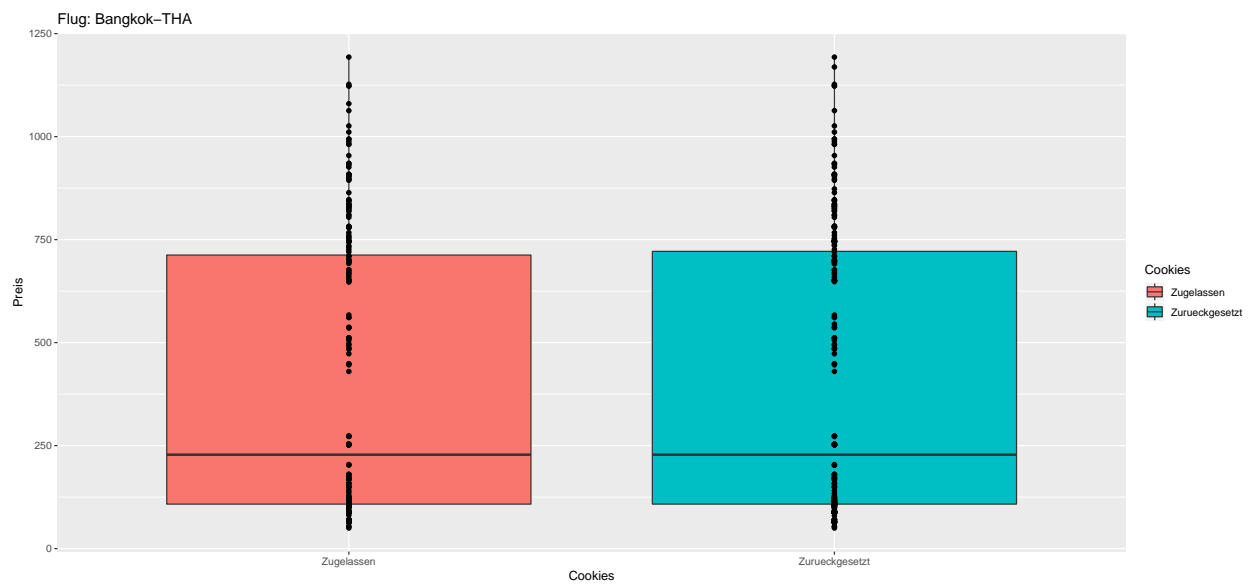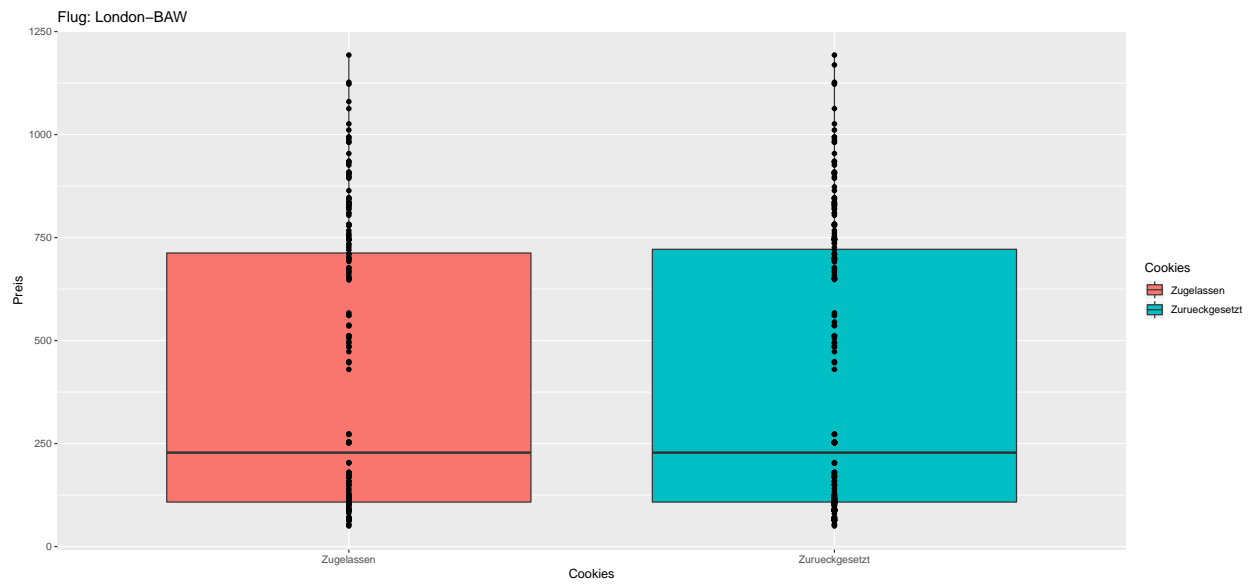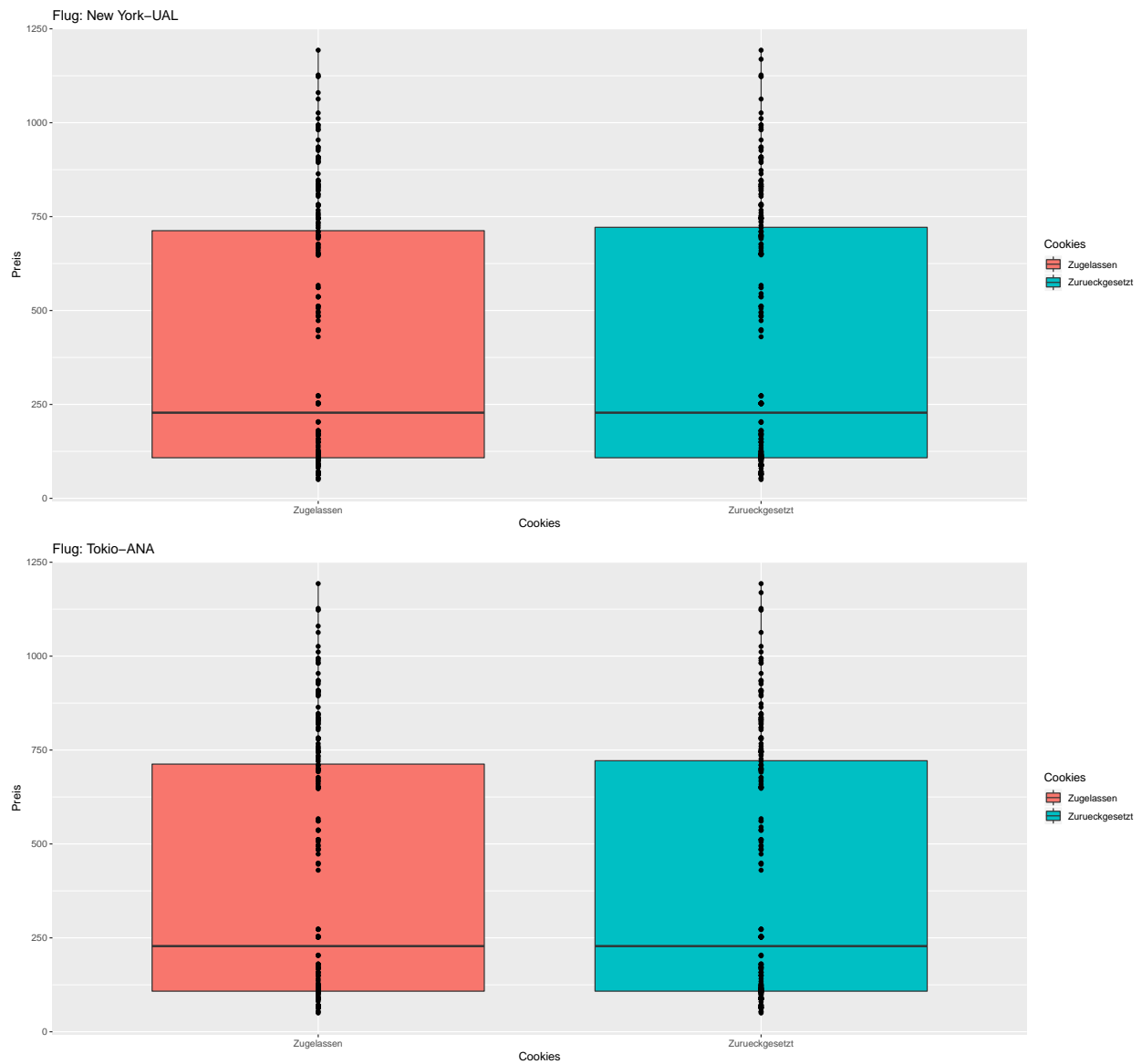
ANOVA

```
## $`Flug: Amsterdam-AUA`
##
##   ANOVA
##
##   ANOVA
##   ------------------------------------------------------------------------------
##                   Sum of Squares     df      Mean Square      F          p          <U+03B7>²p
##   ------------------------------------------------------------------------------
##     Cookies                 5.21      1             5.21      4.71e-5    0.995      0.000
##     Residuals           6.17e+7     558        110573.63
##   ------------------------------------------------------------------------------
##
##
##   ESTIMATED MARGINAL MEANS
```

```
## 
##   COOKIES
## 
##   Estimated Marginal Means - Cookies
##   -------------------------------------------------------
##     Cookies           Mean     SE      Lower     Upper
##   -------------------------------------------------------
##     Zugelassen         396     19.9      357       435
##     Zurueckgesetzt     396     19.9      357       435
##   -------------------------------------------------------
## 
## 
## $`Flug: Berlin-AUA`
## 
##   ANOVA
## 
##   ANOVA
##   ------------------------------------------------------------------------------------
##                   Sum of Squares     df     Mean Square     F          p       <U+03B7>²p
##   ------------------------------------------------------------------------------------
##     Cookies                 5.21      1            5.21     4.71e-5    0.995    0.000
##     Residuals            6.17e+7    558       110573.63
##   ------------------------------------------------------------------------------------
## 
## 
##   ESTIMATED MARGINAL MEANS
## 
##   COOKIES
## 
##   Estimated Marginal Means - Cookies
##   -------------------------------------------------------
##     Cookies           Mean     SE      Lower     Upper
##   -------------------------------------------------------
##     Zugelassen         396     19.9      357       435
##     Zurueckgesetzt     396     19.9      357       435
##   -------------------------------------------------------
## 
## 
## $`Flug: Lissabon-AUA`
## 
##   ANOVA
## 
##   ANOVA
##   ------------------------------------------------------------------------------------
##                   Sum of Squares     df     Mean Square     F          p       <U+03B7>²p
##   ------------------------------------------------------------------------------------
##     Cookies                 5.21      1            5.21     4.71e-5    0.995    0.000
##     Residuals            6.17e+7    558       110573.63
##   ------------------------------------------------------------------------------------
## 
## 
##   ESTIMATED MARGINAL MEANS
## 
##   COOKIES
```

```
## 
##  Estimated Marginal Means - Cookies
##  ---------------------------------------------------------
##    Cookies          Mean     SE      Lower      Upper
##  ---------------------------------------------------------
##    Zugelassen        396    19.9      357        435
##    Zurueckgesetzt    396    19.9      357        435
##  ---------------------------------------------------------
## 
## 
## $`Flug: London-AUA`
## 
##  ANOVA
## 
##  ANOVA
##  ----------------------------------------------------------------------------------------
##                  Sum of Squares    df     Mean Square     F          p        <U+03B7>²p
##  ----------------------------------------------------------------------------------------
##    Cookies                5.21      1            5.21   4.71e-5    0.995      0.000
##    Residuals          6.17e+7     558       110573.63
##  ----------------------------------------------------------------------------------------
## 
## 
##  ESTIMATED MARGINAL MEANS
## 
##  COOKIES
## 
##  Estimated Marginal Means - Cookies
##  ---------------------------------------------------------
##    Cookies          Mean     SE      Lower      Upper
##  ---------------------------------------------------------
##    Zugelassen        396    19.9      357        435
##    Zurueckgesetzt    396    19.9      357        435
##  ---------------------------------------------------------
## 
## 
## $`Flug: Bangkok-AUA`
## 
##  ANOVA
## 
##  ANOVA
##  ----------------------------------------------------------------------------------------
##                  Sum of Squares    df     Mean Square     F          p        <U+03B7>²p
##  ----------------------------------------------------------------------------------------
##    Cookies                5.21      1            5.21   4.71e-5    0.995      0.000
##    Residuals          6.17e+7     558       110573.63
##  ----------------------------------------------------------------------------------------
## 
## 
##  ESTIMATED MARGINAL MEANS
## 
##  COOKIES
## 
##  Estimated Marginal Means - Cookies
```

```
## -------------------------------------------------------
##   Cookies           Mean     SE      Lower    Upper
## -------------------------------------------------------
##   Zugelassen         396    19.9      357      435
##   Zurueckgesetzt     396    19.9      357      435
## -------------------------------------------------------
##
##
## $`Flug: New York-AUA`
##
##  ANOVA
##
##  ANOVA
##  ------------------------------------------------------------------------------------
##                 Sum of Squares    df      Mean Square      F          p       <U+03B7>²p
##  ------------------------------------------------------------------------------------
##   Cookies               5.21       1             5.21   4.71e-5     0.995      0.000
##   Residuals          6.17e+7     558        110573.63
##  ------------------------------------------------------------------------------------
##
##
##  ESTIMATED MARGINAL MEANS
##
##  COOKIES
##
##  Estimated Marginal Means - Cookies
##  -------------------------------------------------------
##   Cookies           Mean     SE      Lower    Upper
##  -------------------------------------------------------
##   Zugelassen         396    19.9      357      435
##   Zurueckgesetzt     396    19.9      357      435
##  -------------------------------------------------------
##
##
## $`Flug: Tokio-AUA`
##
##  ANOVA
##
##  ANOVA
##  ------------------------------------------------------------------------------------
##                 Sum of Squares    df      Mean Square      F          p       <U+03B7>²p
##  ------------------------------------------------------------------------------------
##   Cookies               5.21       1             5.21   4.71e-5     0.995      0.000
##   Residuals          6.17e+7     558        110573.63
##  ------------------------------------------------------------------------------------
##
##
##  ESTIMATED MARGINAL MEANS
##
##  COOKIES
##
##  Estimated Marginal Means - Cookies
##  -------------------------------------------------------
##   Cookies           Mean     SE      Lower    Upper
```

```
##   -----------------------------------------------------
##    Zugelassen          396       19.9       357       435
##    Zurueckgesetzt      396       19.9       357       435
##   -----------------------------------------------------
##
##
## $`Flug: Amsterdam-KLM`
##
##   ANOVA
##
##   ANOVA
##   -------------------------------------------------------------------------------
##               Sum of Squares     df      Mean Square     F          p         <U+03B7>²p
##   -------------------------------------------------------------------------------
##    Cookies             5.21      1              5.21    4.71e-5    0.995      0.000
##    Residuals        6.17e+7    558          110573.63
##   -------------------------------------------------------------------------------
##
##
##   ESTIMATED MARGINAL MEANS
##
##   COOKIES
##
##   Estimated Marginal Means - Cookies
##   -----------------------------------------------------
##    Cookies           Mean     SE       Lower     Upper
##   -----------------------------------------------------
##    Zugelassen          396       19.9       357       435
##    Zurueckgesetzt      396       19.9       357       435
##   -----------------------------------------------------
##
##
## $`Flug: Berlin-EZY`
##
##   ANOVA
##
##   ANOVA
##   -------------------------------------------------------------------------------
##               Sum of Squares     df      Mean Square     F          p         <U+03B7>²p
##   -------------------------------------------------------------------------------
##    Cookies             5.21      1              5.21    4.71e-5    0.995      0.000
##    Residuals        6.17e+7    558          110573.63
##   -------------------------------------------------------------------------------
##
##
##   ESTIMATED MARGINAL MEANS
##
##   COOKIES
##
##   Estimated Marginal Means - Cookies
##   -----------------------------------------------------
##    Cookies           Mean     SE       Lower     Upper
##   -----------------------------------------------------
##    Zugelassen          396       19.9       357       435
```

```
##    Zurueckgesetzt      396    19.9     357      435
## ----------------------------------------------------------
##
##
## $`Flug: Lissabon-LDM`
##
##   ANOVA
##
##   ANOVA
##   ------------------------------------------------------------------------------
##                  Sum of Squares     df     Mean Square     F         p        <U+03B7>²p
##   ------------------------------------------------------------------------------
##    Cookies                 5.21      1            5.21     4.71e-5   0.995    0.000
##    Residuals           6.17e+7     558       110573.63
##   ------------------------------------------------------------------------------
##
##
##   ESTIMATED MARGINAL MEANS
##
##   COOKIES
##
##   Estimated Marginal Means - Cookies
##   ----------------------------------------------------------
##    Cookies           Mean    SE     Lower    Upper
##   ----------------------------------------------------------
##    Zugelassen         396    19.9     357      435
##    Zurueckgesetzt     396    19.9     357      435
##   ----------------------------------------------------------
##
##
## $`Flug: London-BAW`
##
##   ANOVA
##
##   ANOVA
##   ------------------------------------------------------------------------------
##                  Sum of Squares     df     Mean Square     F         p        <U+03B7>²p
##   ------------------------------------------------------------------------------
##    Cookies                 5.21      1            5.21     4.71e-5   0.995    0.000
##    Residuals           6.17e+7     558       110573.63
##   ------------------------------------------------------------------------------
##
##
##   ESTIMATED MARGINAL MEANS
##
##   COOKIES
##
##   Estimated Marginal Means - Cookies
##   ----------------------------------------------------------
##    Cookies           Mean    SE     Lower    Upper
##   ----------------------------------------------------------
##    Zugelassen         396    19.9     357      435
##    Zurueckgesetzt     396    19.9     357      435
##   ----------------------------------------------------------
```

```
## 
## 
## $`Flug: Bangkok-THA`
## 
##   ANOVA
## 
##   ANOVA
##   ------------------------------------------------------------------------------
##                 Sum of Squares    df     Mean Square    F         p       <U+03B7>²p
##   ------------------------------------------------------------------------------
##    Cookies                5.21    1             5.21    4.71e-5   0.995   0.000
##    Residuals          6.17e+7    558       110573.63
##   ------------------------------------------------------------------------------
## 
## 
##   ESTIMATED MARGINAL MEANS
## 
##   COOKIES
## 
##   Estimated Marginal Means - Cookies
##   ----------------------------------------------------
##    Cookies           Mean    SE      Lower    Upper
##   ----------------------------------------------------
##    Zugelassen         396    19.9     357      435
##    Zurueckgesetzt     396    19.9     357      435
##   ----------------------------------------------------
## 
## 
## $`Flug: New York-UAL`
## 
##   ANOVA
## 
##   ANOVA
##   ------------------------------------------------------------------------------
##                 Sum of Squares    df     Mean Square    F         p       <U+03B7>²p
##   ------------------------------------------------------------------------------
##    Cookies                5.21    1             5.21    4.71e-5   0.995   0.000
##    Residuals          6.17e+7    558       110573.63
##   ------------------------------------------------------------------------------
## 
## 
##   ESTIMATED MARGINAL MEANS
## 
##   COOKIES
## 
##   Estimated Marginal Means - Cookies
##   ----------------------------------------------------
##    Cookies           Mean    SE      Lower    Upper
##   ----------------------------------------------------
##    Zugelassen         396    19.9     357      435
##    Zurueckgesetzt     396    19.9     357      435
##   ----------------------------------------------------
## 
## 
```

```
## $`Flug: Tokio-ANA`
##
##   ANOVA
##
##   ANOVA
##   ----------------------------------------------------------------------------
##              Sum of Squares     df     Mean Square     F          p        <U+03B7>²p
##   ----------------------------------------------------------------------------
##     Cookies             5.21      1            5.21    4.71e-5    0.995    0.000
##     Residuals        6.17e+7    558       110573.63
##   ----------------------------------------------------------------------------
##
##
##   ESTIMATED MARGINAL MEANS
##
##   COOKIES
##
##   Estimated Marginal Means - Cookies
##   --------------------------------------------------------
##     Cookies          Mean     SE      Lower     Upper
##   --------------------------------------------------------
##     Zugelassen        396     19.9      357       435
##     Zurueckgesetzt    396     19.9      357       435
##   --------------------------------------------------------
```