A Handbook of Statistical Analyses Using R

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Errata

The document gives a list of typos, errors, inconsistencies etc. which have been spotted. Moreover, small numeric output differences which are due to updated packages are reported here. To get a full list of differences run R CMD check HSAUR on the source package. All issues marked with \textbf{R1}, \textbf{R2} etc have been silently fixed in first reprint, second reprint etc.

Preface

Typo in name of vignette for Chapter 1, should read
\begin{verbatim}
R> vignette("Ch_introduction_to_R", package = "HSAUR")
\end{verbatim}
and
\begin{verbatim}
R> edit(vignette("Ch_introduction_to_R", package = "HSAUR"))
\end{verbatim}
As of version 1.0-3, only the correctly named vignette is available (\textbf{R1}).

16.1 Introduction to R

\begin{itemize}
  \item Type at page 11: \' needs to be double-quoted in \texttt{list.files} (\textbf{R1})
  \item Typo at page 20 (Ex. 1.5): number of companies, not number of countries (\textbf{R1}).
\end{itemize}

16.2 Simple Inference

Typo at page 31, code line 4: use argument \texttt{varwidth = TRUE}, not \texttt{var.width = TRUE} (\textbf{R1}).

16.3 Conditional Inference

\begin{itemize}
  \item The names of the test statistics in the output have been changed from \texttt{T} to \texttt{Z} or \texttt{chi-squared} throughout the chapter (\textbf{R1}).
  \item Reference Hothorn et al. (2006a) updated (\textbf{R1})
\end{itemize}

16.4 Analysis of Variance

Figure 4.3 had wrong line types in legend (Beef and Cereal interchanged) (\textbf{R2}).
16.5 Multiple Linear Regression

- Page 74, Table 5.1: The values for cloudcover and sne had to be exchanged. The corresponding coefficients and Figures in this chapter change accordingly (R1).
- Page 83: both fitted and predict can be used to compute fitted values, the later on can be applied to new unseen data as well (R1).
- Page 87: \( \hat{y}_i \) instead of \( \hat{y} \) in the definition of the standardized residual.

16.6 Logistic Regression and Generalised Linear Models

- Page 97: predictions are to be computed for plasma glm 2, not plasma glm 1 (affects Figure 6.4) (R2).
- Function myplot (page 100): the vfont argument in text has been changed to family = "HersheySerif" (the resulting plots remain the same) (R1).

16.7 Density Estimation

- Page 117: typo: in instead of is
- Page 121: small numeric differences for the output of optim
- Update to mclust version 3.0-0 (new names of parameters in mclust objects)

16.8 Recursive Partitioning

- Page 138: the probability for glaucoma is predict(trees[[i]], newdata = GlaucomaH)[,1] and the code for converting average class probabilities in factors has to be reverted, too. Affects Figure 8.4. (which is now in sync with the interpretation).
- Page 139: small differences in predtab
- Page 140: small differences in table at bottom of this page
- Reference Hothorn et al. (2006b) updated (R1)
- Page 142, Ex. 8.1.: regression tree, not classification tree.

16.9 Survival Analysis

- The name of the test statistic in the output of surv_test has been changed to chi-squared (R1).
- Denominator s was missing from h(t) (page 147) (R2).

16.10 Analysing Longitudinal Data I

Page 168, Figure 10.2: summary does not provide degrees of freedom and p-values in newer versions of lme4.
16.11 Analysing Longitudinal Data II
–nothing known–

16.12 Meta-Analysis
• Page 202: $\mu_i \sim N(\mu, \tau^2)$, not $N(\mu, \tau^2)$ \((R2)\).
• Page 202: $W_i = 1/(V_i + \hat{\tau}^2)$ since $V_i$ is the within-study variance.
• Page 207: square for `selogs` was missing \((R2)\).

16.13 Principal Component Analysis
–nothing known–

16.14 Multidimensional Scaling
In the formula for $b_{ij}$ on page 231 the last term in the parentheses should have a plus sign not a minus sign.

16.15 Cluster Analysis
• update to mclust version 3.0-0 (new plot method)
• Page 248: the likelihood needs $|\Sigma_j|^{-1/2}$
• Page 248: $W_j$ is a $q \times q$ matrix
• Page 248: $\Sigma_j = \Sigma, j = 1, \ldots, c$.
• Page 248:
  \[
  l(\vartheta, \gamma) = -\frac{1}{2} \sum_{j=1}^{c} \text{trace}(W_j \Sigma_j^{-1}) + n_j \log |\Sigma_j|
  \]
• Page 248: $\sum_{j=1}^{c} n_j \log |W_j/n_j|$

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Bibliography
