Statistical Computing with R, 2nd ed.

Errata and Updates

Maria Rizzo

2023-07-18

Corrections

- Equation (4.1) is missing the negative sign in the exponent.

$$P(N(s+t) - N(s) = n) = \frac{e^{-\lambda t}(\lambda t)^n}{n!}$$

- Example 5.1 in function `panel.d`: `on.exit(par(usr=usr))`.
- Example 5.11 (parallel coordinates): lattice package function parallel() has been replaced by parallelplot().
- Example 5.12 code for Figure 5.12: In `stars` change `labels` argument to: `labels = as.character(x$sp)`
- Example 6.7, last displayed equation, rightmost paren. expression should be squared. (The numerical answers following are correct.)
- Example 6.7, page 160, line (-4): $100(1 - 0.003940175/0.2429355) = 98.3781\%$.
- Exercise 6.11, $\hat{\theta}_c$ on lines 3 and 5: $\hat{\theta}_c = c\hat{\theta}_1 + (1-c)\hat{\theta}_2$.
- Page 172, third displayed equation. The expression on right is $Var(g(X)) = nVar(\hat{\theta})$.
- Example 7.1, the index of summation in the equation for $\hat{\theta}$ is j (not i).
- Page 222 "The jackknife estimate of standard error" para. 2, "radial" should be "radical".
- Exercise 8.1: In the second edition, it should be Exercise 9.1 (or 9.0).
- Example 9.7 code: Rerun Example 9.4 code chunk before Example 9.7.
- Example 9.9, page 258 code lines 4, 5:

```
ystar <- dat$yhat + dat$r[i]
xstar <- dat$x
```

- Example 9.10, page 261: Insert the line `theta.hat <- boot.out$t0` before the last line of code.
- Example 9.11: code on page 262

```
n <- NROW(patch)
J <- numeric(n)
b.freq <- boot.array(boot.out)
theta.b <- boot.out$t
```

- Equation (10.4): the upper limit on the sum is $\binom{N}{n}$, in (10.4) and also on the last line of page 266.
- Example 10.11: In the displayed equation, $(0,0)^2$ should be $(0,0)^\top$.
- Exercise 10.3: Change "Example 10.2" to "Example 10.3".

- Exercise 10.5: Exercise 10.10.4 should be Exercise 10.4.
- Last line of Section 12.1.2: For the ggplot version, "geom_frepoly" should be "geom_freqpoly".

```
ggplot(geyser, aes(waiting)) + geom_freqpoly(binwidth=h)
```

- Example 13.4: In the 2nd, 3rd, and 4th displayed equations, z should be replaced with a.
- Example 13.13 code: First argument to `integrate()` should be the function `f1`, not `f`.
- Example 14.4: In the last displayed equation, $f(y|\lambda) = \frac{1}{3}\sum_{j=1}^{3} f_j(y|\lambda)$.
- Examples 15.1 and 15.14: See note below about software changes.
- Example 15.1: In the call to microbenchmark(), remove the final comma after `1:n`.
- Example 15.20: In the Lahman package, data table "Master" has been renamed as "People". (Change the first line of code just above Example 15.21.)
- McGrath and Yeh (2005): The title is "A Quick, Compact Two-Sample Dispersion Test: Count Five".

Software Changes

This section covers updates caused by changes in the software from earlier versions.

R and RStudio

- Section 15.3: Note that RStudio now has a Profile menu.

microbenchmark package

- microbenchmark package has been revised so that `autoplot.microbenchmark` is no longer exported.

The NAMESPACE file now contains (since at least Version 1.4-7):

```
if (getRversion() >= "3.6.0") {
  S3method(ggplot2::autoplot, microbenchmark)
}
```

If ggplot2 is loaded, `autoplot()` displays the ggplot2 violinplot. Alternately, readers can update Examples 15.1 and 15.14 replacing `autoplot` with `boxplot` or in Example 15.1 use `ggplot2::autoplot(mb)` for the violinplot.

In Example 15.14:

```
getS3method("boxplot", class="microbenchmark")
getAnywhere(boxplot.microbenchmark)
```

Remarks

- The simulation reported in Table 10.1 applied function `nn` in package knnFinder to search for nearest neighbors. Package knnFinder is no longer available. The results for the $T_{n,3}$ test may differ somewhat from the table because the $T_{n,3}$ test is now implemented with different software, function `ann` in package yaImpute.
- Exercise 10.2: Refers to the ranks within the pooled sample. Sort each sample before pooling. Note that if there are ties in the data, by default ranks of ties are averaged. Use `ties.method="random"` to avoid this problem. See Anderson [15].