

SOFTWARE UPDATES

for *Semiparametric Regression with R*

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Chapter 3 (2021-04-13). Earlier versions of `R` functions for generalized response regression, such as `glm()` and `gam()`, allowed binary response data to be coded as `no` and `yes`. A change, that appears to have started with version 4.0 of `R`, is that `no/yes` coding is no longer allowed. Instead binary response data must be coded as 0 and 1. This change impacts the book's running example concerning the Boston mortgage data. The first affected code chunk is the last one on page 75 and now needs to be

```
> BostonMortgages$denyBinary <-
+   as.numeric(BostonMortgages$deny == "yes")
> fit1GLMBostMort <- glm(denyBinary ~ black, family = binomial,
+   data = BostonMortgages)
```

Similar changes are needed for code chunks appearing on pages 76, 77, 90, 93, 117 and 127. The ERRATA document for this book has further details on these changes.

Section 3.5 (2019-07-12). In Version 1.1 of the `VGAM` package, the value from a call to the `residuals()` function for a `vgam()` has changed from an earlier version of `VGAM` that was current when the book was published. The last code chunk on page 111 now needs to be

```
> plot(residuals(fitVGAMCaschool)[,c(1,3)], col = "dodgerblue",
+   bty = "n", xlab = "mathematics score residuals",
+   ylab = "reading score residuals",
+   cex.lab = 1.5, cex.axis = 1.5)
> abline(h=0, col = "slateblue") ; abline(v=0, col = "slateblue")
```

to produce the Figure 3.15 plot. The only change is the replacement of `residuals(fitVGAMCaschool)` by `residuals(fitVGAMCaschool)[,c(1,3)]`.

Section 3.5 (2019-03-17). In Version 1.1 of the `VGAM` package, and higher versions, the function `gaussianff()` is deprecated and the function `uninormal()` should be used instead. Therefore, for the current version of `VGAM` the first code chunk of Section 3.5 now should be:

```
> library(VGAM) ; library(Ecdat) ; data(Caschool)
> Caschool$log.avginc <- log(Caschool$avginc)
> fitVGAMCaschool <- vgam(cbind(mathscr, readscr) ~ mealpct
+   + elpct + s(calwpct, df = 3) + s(compstu, df = 3)
+   + s(log.avginc, df = 4), family = uninormal, data = Caschool)
```

If `family = gaussianff` is specified in the `vgam()` call then a deprecation warning message being issued and `family = uninormal` is used.

Section 3.4.2.1 (2018-02-05). The `cosso` package is not installable on all operating systems supported by R. The culprit appears to be the `Rglpk` package on which `cosso` depends. The Comprehensive R Archive Network's CRAN Package Check Results on 2018-02-05 has an `ERROR` for `r-release OS X x86_64 El Capitan`. Until this error is rectified there are likely to be problems with analyses that use `cosso`.