

Corrections for the book “Multivariate Nonparametric Regression and Visualization”

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December 28, 2016

I wish to thank Professor Takezawa for sending me corrections.

1 General Errors

1. Page 9: The 3rd line from the bottom in the 2nd paragraph.
”response variable X_1 is the largest” should be replaced with ”variable X_1 is the largest”.
2. Page 18: The 3rd line.
” σ is an estimate” should be replaced with ” $\hat{\sigma}$ is an estimate”.
3. Page 35: line 7 and line 9.
Term ”canonical” should be replaced by term ”natural”.
4. Page 45: The 2nd line after Eq. (1.90).
”the proposition of wealth is” should be replaced with ”the proposition of wealth which is”.
5. Page 48: Equation 1.96.
” $\prod_{t=T}^{T_1-1} b'_t R_{t+1}$ ” should be ” $\prod_{t=T}^{T_1-1} b'_t R_{t+1}$ ”.
6. Page 56: The 5th line after the itemized statement.
The expression ”We have used in scatter plots histogram smoothing” could be clarified by using ”We have used in scatter plots the method of histogram smoothing”.

7. Page 60: The 3rd line before Eq. (1.108).
 Maybe a better way to write the sentence would be to replace "the estimator uses only one observation" by "the sum in the definition of the estimator contains only one term"
8. Page 62: The 4th line after Eq. (1.111).
 "mean integrated error" should be replaced with "mean integrated squared error".
9. Page 69.
 The definition of \hat{p} appears in two places: (1) at page 69, equation (1.129) and (2) at page 116, the unnumbered equation at the bottom of the page. Thus, it might be more natural to refer at page 121 to the definition at page 116.
10. Page 74: The 3rd line on page 74.
 "we have that" should be replaced with "we have".
11. Page 97: footnote 21.
 "The credit spread" in this footnote should be "The credit spread factor" because this is the monthly change of "the credit spread" not "the credit spread" itself.
12. Page 99: caption of Figure 2.4 (b).
 $X_i = -1, -0.5, \dots, 1.$ should be $X_i = -1, -0.6, \dots, 1.$
13. Page 111: 6th line from the top.
 "When $m = 3$, we call the collection a cubic spline basis." should be "When $m = 4$, we call the collection a cubic spline basis." because "m" stands for the order of splines not the degree of splines.
14. Page 119: Figure 2.12.
 The y-scale of the figure is not correct.
15. Page 142: line 12.
 " $\hat{\sigma}_P^2$ " should be " $\hat{\sigma}_K^2$ ".
16. Page 150.
 "Finally we get the nearest-neighbor regression-based classification rule." should be "Finally we get the nearest-neighbor density-based classification rule."

17. Page 162.
 " $E[(Y^2 | X = x) - f_{reg}(x)]^2$ " should be replaced with " $E[Y^2 | X = x] - f_{reg}(x)$ ".
18. Page 163: second equation.
 " $\sum_{i=1}^q \alpha_i Y_{t-1}^2$ " should be " $\sum_{i=1}^q \alpha_i Y_{t-i}^2$ ".
19. Page 172: 9th line from the bottom.
 "level $p = 0.1$ " should be "level $\alpha = 0.1$ ".
20. Page 203: the last part of caption of Figure 3.37.
 "with the colors black, red, blue, and green" should be "with the colors black, red, blue, and purple".
21. Page 204: caption of Figure 3.38.
 "The h -axis is logarithmic." should be deleted.
22. Page 204: caption of Figure 3.39.
 "The h -axis is logarithmic." should be deleted.
23. Page 213: caption of Figure 3.47.
 "the S&P 500 Sharpe means" should be "the S&P 500 means".
24. Page 214: second paragraph.
 "shown in Figure 3.43" should be replaced with "shown in Figure 3.49".
25. Page 218: Figure 3.54.
 The order of panel (a) and panel (b) should be reversed.
26. Page 221: Figure 3.58.
 The colors of lines in the figure are not consistent with the description in the caption. The correct caption would be:
Wealth of classification portfolio. The black curve shows the cumulative wealth of the portfolio chosen with kernel classification. The red curve shows the wealth when invested in the S&P 500 index, and the blue curve shows the wealth when invested in the Nasdaq-100 index.
27. Page 237: 3rd line from the bottom.
 "response variable" should be "vector of explanatory variables".

28. Page 238: 7th line from the bottom.
 " β " should be " $\hat{\beta}$ " .
29. Page 240: 2nd line.
 "were the regression" should be "where the regression" .
30. Page 257: 8th line.
 "linear local likelihood" should be "local linear likelihood" .
31. Page 264: 4th line of the second paragraph.
 "is a partition of \mathbf{R}^d and is the average of" should be "is a partition of \mathbf{R}^d and \hat{Y}_R is the average of" .
32. Page 268: first line.
 "CART (classification and regression tress)" should be "CART (classification and regression trees)" .
33. Page 278: one line below "6.1.1 Two-Dimensional Scatter Plot" .
 "scatter a plot is plot" should be "scatter plot is a plot" .
34. Page 282: 4th line from the bottom.
 $R(\theta_3)$ should be $R_z(\theta_3)$
35. Page 285: 7th line.
 " $k = 2; \dots, d_0$ " should be " $k = 2, \dots, d_0$ " .
36. Page 312
 The sentence "Panel (b) shows an approximation of level sets with unions of rectangles. The balls and rectangles are colored with a gray scale so that a darker color indicates a larger value of function f." should be changed to "Panel (b) shows an approximation of level sets with unions of triangles. The balls and triangles are colored with a gray scale so that a darker color indicates a larger value of function f."
37. Page 331: A.2 Linear Regression.
 " $\beta_0 = 0, \beta_1 = 2, \beta_2 = -2$ " should be " $\beta_0 = 0, \beta_1 = 1, \beta_2 = -2$ "
38. Preface.
 The URL should be <http://jussiklemela.com/regstruct/>

2 Typos

1. Page 15: one line below "Empirical Quantile".
"based on the dta Y_1, \dots, Y_n " should be replaced by "based on the data Y_1, \dots, Y_n ".
2. Page 45: The 2nd line.
"of of constituents" should be replaced with "of constituents".
3. Page 74: The 18th line.
"case is is important" should be replaced with "case it is important".
4. Page 128: the last line.
"Makowitz criterion" should be "Markowitz criterion".
5. Page 229: 9th line from the bottom.
"concepts semiparametric" should be "concepts of semiparametric".
6. Page 282.
"bn counts" should be "bin counts".
7. Page 284: 2nd line.
"Which makes" should be "which makes".
8. Page 291: the last line.
" $Y_i.$ " should be " $Y_i,$ ".