Errata of Book
Design of Logic-Based Intelligent Systems

Chapter 2

p. 31 Exercise (2.9.6): Replace "contradiction, satisfiable, or unsatisfiable" by "contradiction, or satisfiable".

Chapter 3

Chapter 4

p. 75 line 22: Replace "variables w_i of R_Q" by "variables w_i of R_P".

p. 78 line 4: Replace "$q = False$" by "$q_2 = False$".

p. 84 Line -12: Replace "and S-acceptable assignment" by "an S-acceptable assignment".

p. 88 Exercise (4.8.3), last line on page: Replace "Decide" by "Use the answers for parts (a) and (b) to decide".

Chapter 5

p. 114 Clauses (5.7.9): Delete the second clause "$\neg clogged\_filter \lor replace\_auxiliary$".

Chapter 6

p. 149 line 7: Replace "$j = 0, 1, \ldots, m$" by "$j = 0, 1, \ldots, 4$".

p. 149 line 17 (= second clause of (6.6.2)): Replace "d_4" by "d_3".

p. 149 line 24 (= ninth clause of (6.6.2)): Replace "d_0" by "d_1".

p. 153 Exercise (6.8.8): Replace "where the clauses CNF system" by "where the clauses of the CNF system".

Chapter 7

p. 163 last four lines: Replace the sentence "We define D_1 ... has the value *Unavailable*." by "We define D_1 to evaluate to *False* if there is a literal of D_1 for which the corresponding variable either has the value *Unavailable* or has a *True/False* value that results in the value *False* for the literal."

p. 166 line 6: Replace "$x_1 = x_2 = \cdots = x_k = $ *Unavailable*" by "$x_1 = x_2 = \cdots = x_k = $ *False*".

p. 166 line 17: Replace "$W_A = \{w_4, w_5, w_{10}\}$" by "$W_A = \{w_4, w_5, w_8\}$".

p. 166 line 18: Replace "$x_1 = x_2 = x_3 = $ *Unavailable*" by "$x_1 = x_2 = x_3 = $ *False*".

p. 187 Last sentence in subsection "Selection of Parameter λ": Replace "$\lambda = 1.2$" by "$\lambda_{max} = 1.2$".

p. 195 Exercise (7.10.6) (b), 1st line: After "Use Algorithm OPTIMIZED RECORDS (7.5.8)" insert "with $\lambda = 1.2$".

Chapter 8

p. 200 line -9: Replace "frequencies ... is preserved" by "frequencies ... are preserved".

p. 201 line -6, -5: Replace the sentence "Thus, each ... exactly one record." by "Thus, each subset receives in total l or $l + 1$ records."

p. 204 line 11: Replace "(resp. E_i^{*min} E_i^{*max})" by "(resp. E_i^{*min} and E_i^{*max})".

p. 205 Last paragraph of page: Replace the sentence "Using the power function $\mathcal{G}_A(z) = 1 - \mathcal{F}_A(z)$, the probability of correct classification is $P_{cor|A}(z) = \mathcal{G}_A(z)$." by "Defining $\mathcal{G}_A(z) = 1 - \mathcal{F}_A(z)$, the probability of correct classification is $P_{cor|A}(z) = \mathcal{G}_A(z)$.".

p. 209 line 16: Replace "$\hat{\mathcal{F}}_\mathcal{A}(z) = 6/15 = 0.40$" by "$\hat{\mathcal{F}}_\mathcal{A}(z) = 7/15 = 0.47$".

p. 212 Header of Table (8.6.7) (typesetting): Replace "z" by "z".

p. 215 line 3: Replace "descendants" by "descendant".

p. 217 line -11: Replace "thus, $r \in \mathcal{A}^{p(r)}$" by "thus, $r \in A^{p(r)}$".

p. 221 line 6: Replace "Exercise (8.9.13)" by "Exercise (8.9.12)".

Chapter 9

p. 247 line -6: Replace "$\neg x \wedge \neg y$" by "$\neg x \vee \neg y$".

p. 251 first line: Replace "these" by "this".

p. 254 Exercise (9.6.2): Replace "Algorithm UNSATISFIABILITY (9.2.16)" by "Algorithm INCOMPLETENESS (9.3.15)".

Chapter 10

p. 261 line -2: Replace "Exercise 10.14.12" by "Exercise (10.14.12)".

p. 269 line -4: Replace "We have the values $x_1 = x_2 = \textit{True}$, $x_3 = \textit{Unavailable}$, and $x_4 = \textit{Absent}$." by "We have the values $x_1 = x_2 = x_4 = \textit{True}$ and $x_3 = \textit{Unavailable}$.".

p. 270 Lines 6, 7: Replace "and $x_1 = x_2 = \textit{True}$" by "and $x_1 = x_2 = x_4 = \textit{True}$"

p. 291 line -15: Replace "$j = 1, 2, \ldots, m$," by "$i = 1, 2, \ldots, m$,".

p. 293 Replace "Straach (1998) and Truemper (1999)" by "Straach (1998), and Straach and Truemper (1999)".

p. 295 last line: Replace "(10.4.7)" by "(10.14.7)".

p. 296 Exercise (10.14.10): Replace lines 3–6, which are:

$$\neg x_1 \vee \neg x_2 \vee d_1$$
$$x_3 \vee \neg d_1 \vee d_2$$
$$\neg x_1 \vee \neg x_4 \vee d_3$$

The S-costs of $\textit{True}$ for d_1, d_2, d_3, and d_4 are 7, -5, 2, -10, respectively.

by:

$$\neg x_1 \vee \neg x_2 \vee a_1$$
$$x_3 \vee \neg d_1 \vee a_2$$
$$\neg x_1 \vee \neg x_4 \vee a_3$$

The S-costs of $\textit{True}$ for a_1, a_2, and a_3 are 7, -5, and 2, respectively.

Chapter 11

p. 318 line 15: Replace "if" by "it".

p. 327 last line of Step 3: Replace "$A_1, A_2, \ldots, A_q$" by "$A^1, A^2, \ldots, A^q$".

p. 331 line -9: Replace "reduce" by "simplify".

p. 331 line -8: At end of paragraph, add the sentence: "We allow for the special case where a formula is simplified to the constant *True* or *False*.".

p. 332 line 6: After "the total cost contribution" insert "(resp. the negative of the total cost contribution)".

p. 332 line 8: After "... is minimum." insert the following sentence:

Furthermore, z^{p^*} (resp. z^p) also is the vote total produced by the formulas $D_i'^{p^*}$ and $E_i'^{p^*}$ (resp. $D_i'^p$ and $E_i'^p$) when the optimal *True/False* values of S^p are used in the formulas.

(end of sentence)

p. 332 lines 8 and 9: Replace "If $e^p + d^p < e^{p^*} + d^{p^*}$ or $e^p + d^p = e^{p^*} + d^{p^*}$" by "If $e^p < e^{p^*}$ or $e^p = e^{p^*}$".

References

p. 336 In reference "Bartnikowski, S., ..." replace on second line "of Rational and Set Data" by "of Rational Data and Set Data".