

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 “ $\neg clogged_filter \vee replace_auxiliary$ ”.

Chapter 6

- p. 149 line 7: Replace “ $j = 0, 1, \dots, m$ ” by “ $j = 0, 1, \dots, 4$ ”.
- 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 “ $x_1 = x_2 = \dots = x_k = \textit{Unavailable}$ ” by “ $x_1 = x_2 = \dots = x_k = \textit{False}$ ”.
- 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 “ $x_1 = x_2 = x_3 = \textit{Unavailable}$ ” by “ $x_1 = x_2 = x_3 = \textit{False}$ ”.
- 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 $\mathcal{G}_{\mathcal{A}}(z) = 1 - \mathcal{F}_{\mathcal{A}}(z)$, the probability of correct classification is $P_{cor|\mathcal{A}}(z) = \mathcal{G}_{\mathcal{A}}(z)$.” by “Defining $\mathcal{G}_{\mathcal{A}}(z) = 1 - \mathcal{F}_{\mathcal{A}}(z)$, the probability of correct classification is $P_{cor|\mathcal{A}}(z) = \mathcal{G}_{\mathcal{A}}(z)$.”.

- 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 “ $j = 1, 2, \dots, m$,” by “ $i = 1, 2, \dots, m$,”.
- 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:

$$\begin{aligned} &\neg x_1 \vee \neg x_2 \vee d_1 \\ &x_3 \vee \neg d_1 \vee d_2 \\ &\neg x_1 \vee \neg x_4 \vee d_3 \end{aligned}$$

The S -costs of *True* for d_1 , d_2 , d_3 , and d_4 are 7, –5, 2, –10, respectively.
by:

$$\begin{aligned} &\neg x_1 \vee \neg x_2 \vee a_1 \\ &x_3 \vee \neg d_1 \vee a_2 \\ &\neg x_1 \vee \neg x_4 \vee a_3 \end{aligned}$$

The S -costs of *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, \dots, A_q ” by “ A^1, A^2, \dots, 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”.