

Errata for *Probabilistic Graphical Models: Principles and Techniques*, Daphne Koller and Nir Friedman, The MIT Press
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- Page 41, exercise 2.17, should read $K = |\text{Val}(X)|$. (Found by Joel Pfeiffer.)
- Page 41, exercise 2.19(a), should read $I_P(X; Y | Z) = H_P(X | Z) - H_P(X | Y, Z)$. (Found by Joel Pfeiffer.)
- Page 53, Figure 3.4, table for *Grade* is incorrect, should read i^1, d^0 in the third row and i^1, d^1 in the fourth row. Table for *Letter* should read g^3 in the third row.
- Page 53, Line -7, should read read 50 percent.
- Page 61, Equation 3.15, should read “=” instead of “==”.
- Page 96, Exercise 3.2c., is confusing, probably should read something along the lines of “...that is, can be written as $\sum_{i=1}^n \alpha_i x_i + \alpha_0$ (where $\text{Val}(X_i) = \{0, 1\}$ for $i = 1, \dots, n$).”
- Page 120, Example 4.5, Line 1 should read “... over $\mathcal{X} = \{X_1, \dots, X_n\}$; let $\mathcal{X}' = \{X'_1, \dots, X'_n\}$”
- page 127 Box 4.D line 3: to each X_i a ‘label’ in the space V . (Found by Gaurav Srivastava.)
- page 128 Figure 4.10: Some entries are sign-wrong. $\epsilon_1(a^0, b^1) = -1.61$, $\epsilon_1(a^1, b^1) = -2.3$, $\epsilon_2(a^1, b^1) = -4.61$. (Found by Gaurav Srivastava.)
- page 171 Example 5.14: $(J \perp_c L | a^0, s^1) \rightarrow (J \perp_c L | a^1, s^1)$. (Found by Gaurav Srivastava.)
- page 248 Equation above (7.2), second line, instead of $-2\mathbf{x}^T J \mathbf{u}$ should read $-2\mathbf{x}^T J \boldsymbol{\mu}$. (Found by Rob Gevers.)
- page 259 Exercise 7.7 contains three typos (found by several students)
 1. Conditional covariance is usually defined without integrating out the covariate, $\text{Cov}_p[X_i; X_j | \mathbf{Z}] = E_p[(X_i - E[X_i | \mathbf{Z}]) (X_j - E[X_j | \mathbf{Z}])]$. If covariate is to be integrated out, the expression for the first equation should then be
$$\text{Cov}_p[X_i; X_j | \mathbf{Z}] = E_p(\mathbf{Z}) E_{p(X_i, X_j | \mathbf{Z})} [(X_i - E[X_i | \mathbf{Z}]) (X_j - E[X_j | \mathbf{Z}])].$$
 2. Second equation should read $\rho_{i,j} = \frac{\text{Cov}_p[X_i; X_j | \mathcal{X} - \{X_i, X_j\}]}{\sqrt{\text{Var}_p[X_i | \mathcal{X} - \{X_i, X_j\}] \text{Var}_p[X_j | \mathcal{X} - \{X_i, X_j\}]}}$.
 3. Third equation should read $\rho_{i,j} = -\frac{J_{i,j}}{\sqrt{J_{i,i} J_{j,j}}}$.
- page 312 Example 9.3 provides neither the correct ordering nor follows it. (Found by Bunyamin Sisman.)

- page 346 Example 10.1, line 3, “factor $\tau_3(G, S)$ ” should read “message $\tau_3(G, S)$.” (Found by Ryan Rossi.)
- page 375 Clique tree construction, item 3 first word should be “Find”.
- page 390 Fixed-point characterisation of Belief Propagation, Lagrange multiplier λ_i should be

$$\lambda_i = \frac{1}{2} \|Nb_i\| - 1$$

- page 447, Theorem 11.8: τ_i , should be τ_{ij} . So $\delta_{i \rightarrow j}[s_{ij}] \propto \exp\{\lambda_{ij} \cdot \tau_{ij}(s_{ij})\}$
- page 785 Section 18.1.2 Paragraph starting with “The second approach”, first sentence should read “The second approach is score-based structure learning.” (Found by Student.)