An Introduction to Time Series Modeling, 3rd ed by Andreas Jakobsson

Errata: 201209

Below is a list of corrections/typos found so far:

- p. 33, eq (2.58), there is a conditioning too much. The equation should read
$$V\{\mathbf{e}\} = \mathbf{R}_{\mathbf{y},\mathbf{y}} - \mathbf{R}_{\mathbf{y},\mathbf{x}}\mathbf{R}_{\mathbf{x},\mathbf{x}}^{-1}\mathbf{R}_{\mathbf{y},\mathbf{x}}^{*} = E\Big\{V\{\mathbf{y}|\mathbf{x}\}\Big\}$$

- p. 35, Exercise 2.3, there is a conditioning too much. The equation should read
$$V\{\mathbf{e}\} = E\Big\{V\{\mathbf{y}|\mathbf{x}\}\Big\}$$

- p. 50, eq (3.50), the process should be denoted y_t, not x_t, to make the following notation consistent.

- p. 80, eq (3.176) should be for $k > q$, with $r_y(k) = r_y^*(-k)$, for $k < 0$.

- p. 133, there are missing minus signs in the equation below (4.55), which should read
$$\begin{array}{ll} h_k = 0, & k < d \\ h_k = -a_1^{(2)}h_{k-1} - \ldots - a_r^{(2)}h_{k-r} + b_{k-d}, & k = d, d+1, \ldots, d+s \\ h_k = -a_1^{(2)}h_{k-1} - \ldots - a_r^{(2)}h_{k-r}, & k > d+s \end{array}$$

- p. 145, there is a missing ∇ in (4.86), which should read
$$\epsilon_t = A(z)\nabla y_t$$
The figure in Figure 4.29(b) is also incorrect; Figure 1.1 below shows the corrected figure. The suggested model should use either $(d, r, s) = (0, 0, 0)$ or $(d, r, s) = (0, 0, 1)$.

- p. 224, plus should be minus in eq (6.9) and (6.10), so that these read
$$\begin{aligned} r_y(2) - w_1 r_y(0) - w_2 r_y(1) &= 0 \\ r_y(1) - w_1 r_y(1) - w_2 r_y(0) &= 0 \end{aligned}$$
Also, in eq (6.14), there is one minus sign too much; w_2 should be
$$w_2 = \frac{\rho_y(1)}{1 - \rho_y^2(1)}$$

- p. 274, Exercise 7.4, the text should say "for $p = 1, \ldots, 5$".

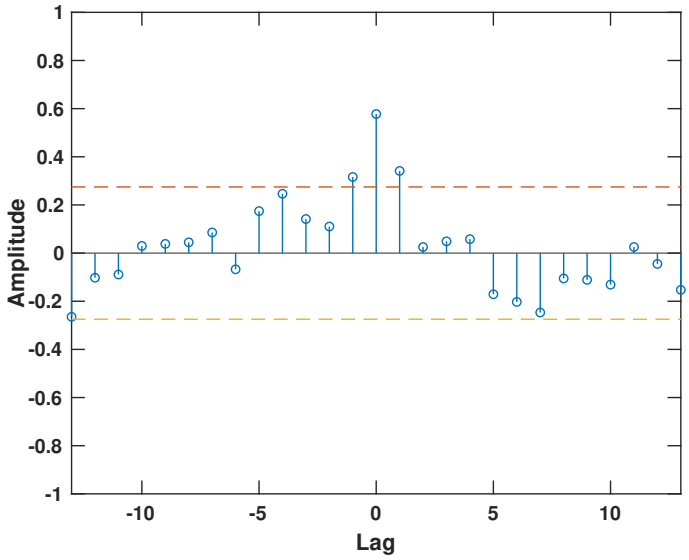

Figure 1.1: The estimated crosscorrelation.

- p. 323, solution to problem 2.3, there is a conditioning too much. The solution should read

$$\begin{aligned} V\{\mathbf{e}\} &= E\Big\{V\left\{\mathbf{y}-\mathbf{m}_{\mathbf{y}|\mathbf{x}}|\mathbf{x}\right\}\Big\} + V\Big\{E\left\{\mathbf{y}-\mathbf{m}_{\mathbf{y}|\mathbf{x}}|\mathbf{x}\right\}\Big\} \\ &= E\Big\{V\left\{\mathbf{y}|\mathbf{x}\right\}\Big\} + V\Big\{E\left\{\mathbf{y}|\mathbf{x}\right\}-\mathbf{m}_{\mathbf{y}|\mathbf{x}}\Big\} \\ &= E\Big\{V\left\{\mathbf{y}|\mathbf{x}\right\}\Big\} \end{aligned}$$

- p. 329, solution to problem 3.7, there is a c_1 missing. The sentence should read: "The process (b)-(f)-(i) is an MA(1) process, with $r(1) = \sigma^2 c_1$, yielding $c_1 = 0.9$ according to the figure."

- p. 334, missing minus sign. The equation should read

$$\begin{aligned} \rho_{x,y}(\tau) \triangleq \rho_{x,y}(t,t-\tau) &= \frac{r_{x,y}(t,t-\tau)}{\sqrt{r_x(0)r_y(0)}} \\ &= \frac{r_{x,y}(t,t-\tau)}{\sigma_x^2\sqrt{h_0^2+h_1^2+\frac{\sigma_e^2}{\sigma_x^2}}} = \begin{cases} \frac{h_0}{\sqrt{h_0^2+h_1^2+\frac{\sigma_e^2}{\sigma_X^2}}} & \tau = 0 \\ \frac{h_1}{\sqrt{h_0^2+h_1^2+\frac{\sigma_e^2}{\sigma_X^2}}} & \tau = -1 \\ 0 & \text{otherwise} \end{cases} \end{aligned}$$