STATISTICAL THEORY. A CONCISE INTRODUCTION (Second Edition)

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ERRATA

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- p.120, Example 6.17. Table 6.1 should be placed here.
- p.121, Section 6.5.3. Typo: the hypotheses should be $H_0 : \theta \in (\theta_0 - \epsilon, \theta_0 + \epsilon)$ versus $H_1 : \theta \notin (\theta_0 - \epsilon, \theta_0 + \epsilon)$.
- p.129. Question 7.1. The more accurate version is "Show that for any prior $\pi(\theta)$ the Bayes risk $\rho(\pi, \delta^*_\pi)$ is not larger than the minimax risk w.r.t. the same loss."
- p.134, Example 7.19. Typo: a correct rejection region $\Omega_{1C}(\mathbf{y})$ should be $\Omega_{1C}(\mathbf{y}) = \{\mathbf{y} : \lambda(\mathbf{y}) = \frac{\mathbf{f}_{\theta_1}(\mathbf{y})}{\mathbf{f}_{\theta_0}(\mathbf{y})} \geq \mathbf{C}\}$ (not $\frac{\ln f_{\theta_1}(\mathbf{y})}{\ln f_{\theta_0}(\mathbf{y})} \geq C$).
- p.178. The correct version is: $RSS_{test}(h)/n_{test} - \sigma^2$ an unbiased estimator of $AMSE(\hat{g}_h, g)$, not $RSS_{test}(h)/n_{test} + \sigma^2$.
- p.213, solution of Exercise 6.1. The correct solution is:
  Calculate the sequential posterior distribution $\pi^*(\theta|y_1, y_2)$ and compare it with its counterpart $\pi(\theta|y_1, y_2)$ based on the entire data (y_1, y_2). We have

$$\pi(\theta|y_1) = \frac{f(y_1|\theta)\pi(\theta)}{f(y_1)} \ ,$$

$$\pi^*(\theta|y_1, y_2) = \frac{f(y_2|\theta)\pi(\theta|y_1)}{f(y_2)} = \frac{f(y_2|\theta)f(y_1|\theta)\pi(\theta)/f(y_1)}{\int f(y_2|\theta)f_1(y_1|\theta)\pi(\theta)d\theta/f(y_1)} = \frac{f(y_2|\theta)f(y_1|\theta)\pi(\theta)}{\int f(y_2|\theta)f_1(y_1|\theta)\pi(\theta)d\theta} \ ,$$

  whereas due to the independency of y_1 and y_2 given θ,

$$\pi(\theta|y_1, y_2) = \frac{f(y_1, y_2|\theta)\pi(\theta)}{f(y_1, y_2)} = \frac{f(y_1|\theta)f(y_2|\theta)\pi(\theta)}{\int f(y_1|etaeta)f(y_2|\theta)\pi(\theta)d\theta} = \pi^*(\theta|y_1, y_2) \ .$$