Problem 11

Wednesday, June 12, 2024 3:49 PM

q_k, b_{kj}, b_{kjl} in 4.33

answer should involve $\pi_k, \pi_K, \mu_k, \mu_K, \Sigma_k, \Sigma_K$

$$\log\left(\frac{Pr(Y=k|X=x)}{Pr(Y=K|X=x)}\right) = a_k + \sum_{j=1}^{p} b_{kj} x_j + \sum_{j=1}^{p}\sum_{l=1}^{p} c_{kjl} x_j x_l$$

$$a = \log\left(\frac{\pi_k}{\pi_K}\right)$$

$$c = \log\left(\frac{c_{kjl} x_j x_l}{c_{Kjl} x_j x_l}\right)$$

$$b = \log\left(\frac{b_{kj} x_j}{b_{Kj} x_j}\right)$$