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Dear Sir or Madam,

Sorry to bother you abruptly, currently I am a graduate student in FuDan University, in China. Recently I have been studying your book ***Pattern Recognition and Machine Learning***. It is a brilliant master piece and I take it as "the bible for machine learning". After finishing reading every chapter, I try to solve very exercise. In this process, I have found several typos and I would like to share them with you, just for your reference.

1. In Problem 1.36. the statement is not accurate. If the second derivative is strictly positive, the function must be strictly convex. However, the converse may not be true. For example $f(x) = x^4,\ g(x) = x^2,\ x \in \mathcal{R}$ are both strictly convex by definition, but their second derivatives at $x = 0$ are both indeed 0 (See keyword convex function on Wikipedia or Page 71 of the book Convex Optimization written by Boyd, Vandenberghe for more details).

2. Problem 2.35. is not accurate. In Prob.2.35, equation (2.291) should be $\mathbb{E}[\boldsymbol{x_n}\boldsymbol{x_m}^T] = \boldsymbol{\mu}\boldsymbol{\mu}^T + \boldsymbol{I_{mn}}\boldsymbol{\Sigma}$, the transpose of $\boldsymbol{x_m}$ is missing.

3. The solution for 4.18. is wrong, because $\Phi'(a) = \frac{1}{\sqrt{2\pi}} exp(-\frac{a^2}{2})$.

Moreover, there are a few problems that I am not sure if I am right. I will appreciate if you can share your solution manual with me. The problems I am not sure include :

Problem 2.37, Problem 2.58

Some may be my mistakes, please correct my if I am wrong. Thank you for your time and consideration! This book is really extraordinary!

I am looking forward to your reply.

Sincerely,

Zhengqi Gao