

# CP2 Feedback

## Overall Feedback

There were many very good reports, and many people clearly took time to engage with the practical.

Some marks were lost for omissions that could be avoided by reading questions carefully and ensuring that they have been answered.

It seems that some students were confused about what certain questions were asking, yet did not post questions on the discussion board or email me.

## Questions 1–3

- Some students had unnecessarily complicated derivations (no marks lost), mainly as a result of ignoring the suggestion.
- Quite a few students wrote expressions involving a single Bernoulli success parameter  $p$ , which is incorrect and often led to confusion in the remainder of the derivation. Similarly, many students wrote things like  $\theta^T x_i = z$  and proceeded to do calculations. This does not make sense, although writing  $z_i$  instead would have been okay. If the derivation was otherwise correct, the mark was not lost.
- Many students did not apply the chain rule correctly.

## Question 4

- Some students made conceptual or calculation mistakes with the appropriate quantile of the the normal distribution, or the approximate standard deviation.

## Question 5

- Mistakes in this question should have been detected just by virtue of the fact that the coverage should be close to 0.95 for both parameters, and any inconsistency with this should have been alarming.
- A few students made mistakes by indexing theta or the confidence interval endpoints with the index of the trial rather than the values 7 or 8.
- A few students used a very small number of repeated experiments, which gave inaccurate results.
- Some students did not use the definition of coverage and instead reported a single observed confidence interval.

## Question 6

- Again, serious mistakes in this question should have been detected.
- Some students did not compute the Fisher information matrix associated with `big.X` (typically because they computed the inverse of the negative Hessian outside of the `compute.CI.endpoints` function), and therefore had incorrect expressions for the confidence intervals. Again, this affected coverage, so it should have been detected.

Mark distribution (for the 166 people who submitted)

