

# Homework for Backpropagation in MLP

(Ungraded)

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# Questions

The following questions will make you comfortable with the derivations we did here:

- Q1 Derive the complete backpropagation procedure for a classification problem with  $c$  classes. Here,  $L$  is the cross-entropy loss.
- Q2 Derive the complete backpropagation procedure for a regression problem. Here  $L$  is the SSE.
- Q3 What happens to the derivations if we have a batch-size greater than 1 in our training? What would change in our derivations?

Submit your answers in PDF at my email. You can also submit Python notebooks showing individual computation at scalar-level (for this share your GitHub repository link).