CS 7150: Deep Learning — Fall 2024 — Paul Hand

Day 16 — Preparation Questions For Class
Due: Tuesday 11/5/2024 at 12:30pm via Gradescope

Names: [Put The Names Of Your Group Here]

You may consult any and all resources in answering the questions. Your goal is to have answers that are ready to be shared with the class (or on a hypothetical job interview) as written. Your answers should be as concise as possible. When asked to explain a figure, your response should have the following structure: provide context (state what experiment was being run / state what problem is being solved), state what has been plotted, remark on what we observe from the plots, and interpret the results.

Submit one document for your group and tag all group members. We recommend you use Overleaf for joint editing of this TeX document.

Directions: Read 'Overcoming catastrophic forgetting in neural networks' by Kirkpatrick et al.

- Read Sections 1, 2.0, 2.1, 3

Question 1. *Provide a summary of the contributions of this paper.*

Response:

Question 2. *Derive equation (2). Your response should point out any assumptions the derivation is making.*

Response:

Question 3. *Explain how formulation (3) is obtained from equation (2).*

Response:

Question 4. *Explain Figure 2ab. Make sure to include the context, a statement of what literally is plotted, what is to be observed, and what is concluded.*

Response:
    Context:
    What is plotted:
    What we observe:
    Interpretation:

Question 5. *Explain Figure 2c. Make sure to include the context, a statement of what literally is plotted, what is to be observed, and what is concluded.*

Response:
    Context:
    What is plotted:
    What we observe:
    Interpretation:

Question 6. *How is the algorithm in this paper biologically inspired? Why is the method called 'elastic weight consolidation'?*

Response: