

CS 7150: Deep Learning — Summer-Full 2020 — Paul Hand

Week 8 — Preparation Questions For Class

Due: Monday June 29, 2020 at 12:00 PM Eastern time via [Gradescope](#)

Name: [Put Your Name Here]

Collaborators: [Put Your Collaborators 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. **Make sure to tag each question when you submit to Gradescope.**

Directions: Read the article '[Learning From Noisy Singly-labeled Data](#)'.

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

Response:

Question 2. *What model for rater errors do the authors assume? What is unreasonable about this model?*

Response:

Question 3. *The authors introduce a Model Bootstrapped EM (MBEM) algorithm. They compare their method to the EM algorithm and a weighted-EM algorithm. Clearly present the EM and weighted-EM algorithms. Succinctly state the difference between MBEM and EM.*

Response:

Question 4. *Does the MBEM algorithm involve directly training a neural network? If so, which line of Algorithm 1 involves training a net?*

Response:

Question 5. *If only one label is provided for a given training image, how is it even possible to assess the quality of that training label? What information is being leveraged that makes this possible?*

Response:

Question 6. *In Figure 1, why is the 'Oracle weighted EM' curve shown? Why is the 'Oracle correctly labeled' curve shown? Would it be possible for any algorithm to beat 'Oracle correctly labeled'? If not, why does the dashed line on the bottom of the graph show superior performance?*

Response:

Question 7. *Explain Figure 1. Make sure to set up the context, state what is plotted, state what is to be observed, and state what conclusion is reached. What are the dashed lines?*

Response: