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MATH 6380o. Advanced Topics in Deep Learning

Fall 2019

Group 1:

• Describe the strengths of the report.

The group has correctly implemented some cutting edge algorithm such as scattering net with known variants to predict MNIST dataset.

• Describe the weaknesses of the report.

The report seems very small and it lacks state of the art algorithm to predict MNIST.

• Evaluation on Clarity and quality of writing (1-5): Is the report clearly written? Is there a good use of examples and figures? Is it well organized? Are there problems with style and grammar? Are there issues with typos, formatting, references, etc.? Please make suggestions to improve the clarity of the paper, and provide details of typos.

I will give a mark of 3. I am confused about the concept of scattering net, a better explanation would have been more appropriate. The report is however well presented but as previously mentioned it lacks content (only one poster given)

• Evaluation on Technical Quality (1-5): Are the results technically sound? Are there obvious flaws in the reasoning? Are claims well-supported by theoretical analysis or experimental results? Are the experiments well thought out and convincing? Will it be possible for other researchers to replicate these results? Is the evaluation appropriate? Did the authors clearly assess both the strengths and weaknesses of their approach? Are relevant papers cited, discussed, and compared to the presented work?

I will give a mark of 3. The results compared to state-of-the-art technics are as larger as 1.5% test error. Instead of using PCA, the group could have used variational autoencoder instead as they have shown that features are not linear. Impossible to replicate the results due to the lack of content. The evaluation is appropriate. They have not stated the strengths and weaknesses of their approach. Only few references are provided.

• Overall rating: (5- My vote as the best-report. 4- A good report. 3- An average one. 2- below average. 1- a poorly written one).

3- An average one

• Confidence on your assessment (1-3) (3- I have carefully read the paper and checked the results, 2- I just browse the paper without checking the details, 1- My assessment can be wrong)

A mark of 3.