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Grades



Print



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Grade Item	Points	Weight Achieved	Grade	Comments and Assessments
Homework		50 / 50	100 %	
HW01	10 / 10	8.5 / 8.5	100 %	<div>Overall Feedback</div> <div>Pros:</div> <ul style="list-style-type: none">Comprehensive with good analysis and comparison <div>Cons:</div> <ul style="list-style-type: none">Plot multiple methods in 1 figure for good comparison. You should even though it's optional.It's nicer to recognize that Line 3 has a large error because of the test set is inconsistent with the training set) and not due to overIt would be nicer to have a plot of time/loss for the x/y axis for t speed vs. loss. (you need multiple methods on the same figure fo

- It would be nicer to explain why the third method (analytic grad) method (finite difference)
- It would be nicer to try and predict which method would scale better on a complicated model, high dimensional, etc. and explain.

Overall Feedback

Pros:

- Comprehensive with good analysis and comparison

Cons:

- Plot multiple methods in 1 figure for good comparison. You should even though it's optional.
- It's nicer to recognize that Line 3 has a large error because of the test set is inconsistent with the training set) and not due to overfitting.
- It would be nicer to have a plot of time/loss for the x/y axis for the speed vs. loss. (you need multiple methods on the same figure for comparison)
- It would be nicer to explain why the third method (analytic grad) method (finite difference)
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HW02

10 / 10

8.5 / 8.5

100 %

Overall Feedback

- 18 pages. Really?
- (+0.5) Additional test for $\sigma=0.2$
- I don't think that section 3.5 is very useful.
- (+0.5) Extra experiments with different numbers of points in each plot
- (+1) Nice convergence plots in Fig 5, 6, 7, 8, 9, 10
- (-0.5) Missing the analysis why the Training error is lower than the test error
- Fig 7a: the similarity score should go to 1 here. Double check?

- The experiment in Fig 9 is not very different from Fig 8.
- (+0.5) Nice PCA usage and plot (Fig 12).

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HW03

13 / 10

11.05 / 8.5

130 %

Overall Feedback

- (+2) For PCA and TSNE figures and analysis
- (+1) For the acc/loss changing with different bins value graph
- A visualization of the Naive Bayes's classifier would be nice. Extra: visualize the decision boundary (on the PCA or TSNE figure).
- You should clean up the later cells of the notebook. There is a (?) that you should clean this up.
- Putting the important result (Table 1) as early as possible => Nice
- Some keywords used in research based on your description: "Class imbalance", "data imbalanced", "Feature Distribution Differences" => Distributional shift. Dependence: It actually works surprisingly well even when this assumption is violated. You can google some articles about this phenomenon.
- No code for part 3 (posterior)?
- (+3) Analysis for Part 3: correct. It would be better if you could report the variance of having $P(c | X)$, as it provides you with a full distribution with confidence (variance). In contrast, modern NN can only provide a peak (a mode).

distribution) or a pseudo-distribution (the soft-max of NN does not provide a true distribution).
Prof. Kobus's PGM class to see this :D

(26/20)

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(26/20)

HW04

8.5 / 10

7.23 / 8.5

85 %

Overall Feedback

- The Github link was not found.
- (-0.5) Fig 1, dataset 3: This is not overfitting since the model is not overfitting (the training error is decreasing and the test error is decreasing of the figures in Fig1). You can only conclude about overfitting when the training error is decreasing and the test error is increasing plateau and the test error is increasing.

- (-0.5) Fig 1, dataset 4: this does not suggest overfitting. This may be due to a different training or a test set that is different from the training set (distribution shift).
- The figure text is too small. Try increasing the font size a bit to make it readable in your documents. At least for the headers and axis. Your figure is too small, so I suggest changing the dpi of matplotlib to higher.
- (+2) Kudos for trying different values of lr and a number of epochs.
- (-3) Wrong conclusion about NN is worse than Naive Bayes. I suggest a better improper choice of learning rate. I gave you some extra details in the feedback.
- (+0.5) Fig 3 is of limited utility. Same with tables 3-6.

Overall Feedback

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HW05	14 / 10	11.9 / 8.5	140 %	Overall Feedback	<ul style="list-style-type: none">• (-1) Fig 1 The model is not converged yet (need a flat tail on the training error).• (+1) Fill_between• (+0.5) Additional experiments Table 2,3. Table 2 is a bit suspicious. Try to observe a better result, even though the model hasn't converged yet.
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- (-1) You should choose a larger NN (so the medium has the best demonstrate that bigger is not always better. This caused Ming t conclusion in 2.3 (when the NN is too large, even adding regular enough to help. Refer to the deep models before ResNet).
- (+0.5) Nice analysis. Seulgi is correct, but you should focus more exp, the larger NN is better. To make any general conclusion like lot of data on multiple datasets, etc.
- There is no additional point for the dropout exp because the mo so dropout only hurts the performance. You should only add reg observe a large train-val gap, and you want to close the gap.
- (+2) Optional Q3
- (+2) Optional Q4. You should try to explain why ResNet is better of the Residual in the architecture design). And the fig definitely potentially.

Overall Feedback

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HW06

12.5 / 10

9.38 / 7.5

125 %

Overall Feedback

- Thank you for the theory and formula reminders. A bit unnecessary.
- Fig 1,2: Train loss does not flatten => not converge yet. You correct there is no point loss. Fig 4 is still not converged, though.
- (-0.5) You should plot Fig 1 and 2 in the same plot for comparison the instruction
- (+2) Good analysis and explanation. Optional further reading: <https://proceedings.neurips.cc/paper/2020/hash/288cd256795Abstract.html>
- (+1) K-folds

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HW07 (Bonus)

3 / 10

2.25

Overall Feedback

- No point was added for the paper discussion
- (+3) missing extra credits for the Assignment 1 that was missing

Overall Feedback			
<ul style="list-style-type: none">No point was added for the paper discussion(+3) missing extra credits for the Assignment 1 that was missing			
Quizzes		10 / 10	100 %
Quiz 01	10 / 10	10 / 10	100 %
Activities		9.7 / 10	97 %
Activity 01	10 / 10	3 / 3	100 %
Activity 02	10 / 10	1 / 1	100 %
Activity 03	10 / 10	1 / 1	100 %
Activity 04	10 / 10	1 / 1	100 %
Activity 05	10 / 10	1 / 1	100 %
Activity 06	9 / 10	2.7 / 3	90 %
Midterms		9.28 / 10	92.8 %

Midterm 1 raw score	59 / 70	0 / 0	84.29 %
Midterm 1	92.8 / 100	9.28 / 10	92.8 %
Final		17.98 / 20	89.9 %
Final	89.9 / 100	17.98 / 20	89.9 %
Final raw score	87.5 / 100	0 / 0	87.5 %
SCS bonus (Bonus)	10 / 10	2	