Homework 1 Question 2

48/50 Points

29/09/2023

Attempt 1

Review Feedback
29/09/2023

Attempt 1 Score:
48/50

Add Comment

Anonymous Grading: **no**

Unlimited Attempts Allowed
01/09/2023

Details

Introduction

This portion of Homework 1 will be done individually, not in a group. Same as in Question 1, your assignment should be submitted by uploading your code (in the form of a **Jupyter Notebook (.ipynb) AND pdf copy of the files** – so we can make comments directly on the file) to Canvas. **Be sure to run the file before committing so that we can directly see your results.** Please mention all the resources that were used to solve the problem (e.g., websites, books, research papers, other people, etc.). To complete the assignment, you can use any Python (or R) package that you want, but we recommend using Scikit-Learn.

Question

To gain a better understanding of the differences across datasets, perform the same tasks as in Question 1, but on a dataset of your choice (if you worked on a team for Question 1, please do not select the same dataset as your team members). The dataset should contain multiple features and you can perform univariate or multivariate regression.

View Rubric

Select Grader

Madhura Ashtekar (TA)

(https://iu.instructure.com/courses/2165858/modules/items/30397201)

Attempt (https://iu.instructure.com/c

HW1 Rubric

Criteria	Ratings		Pts
Question-A	**5 to >0 pts** **Summarization** How much data is present? - 1 pt, What attributes/features are continuous valued? - 2 pts, Which attributes are categorical? - 2 pts **Comments** timestamp seems to be categorical	**0 pts** **No Marks**	3 / 5 pts
Question-B	**5 to >0 pts** **Visualization and summary Statistics** Visualization and summary Statistics -3 pts , Special Treatment Needed - 2 pts	**0 pts** **No Marks**	5 / 5 pts
Question-C	**5 to >0 pts** **Correlation** PCC table has been computed -1 pt, Scatter Plots -2 pts, Discussion - 2 pts	**0 pts** **No Marks**	5 / 5 pts
Question-D	**5 to >0 pts** **Splitting - Test/Train** Correctly splitting into test/train -2 pts, Verification - 3 pts	**0 pts** **No Marks**	5 / 5 pts
Question-E Part 1 view longer description	**2 to >0 pts** **Regression** Linear Model using K-Fold with Normal form and SGD (train and val loss)	**0 pts** **No Marks**	2 / 2 pts

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HW1 Rubric

Criteria	Ratings		Pts
	Regularization Regularization with different penalty terms - Ridge - 0.5 pt, Lasso - 0.5 pt. Elastic Net - 0.5 pt, Impact - 0.5 pt	**No Marks**	
Question-E Part 3	**5 to >0 pts** **Hyper parameter tuning and Description** Hyper parameter tuning - (Batch size - Learning rate) - 2 pts, Description of models - 3 pts	**0 pts** **No Marks**	5 / 5 pts
Question-F Part 1 view longer description	**2 to >0 pts** **Regression** Polynomial Model using K-Fold with Normal form and SGD (train and val loss)	**0 pts** **No Marks**	2 / 2 pts
Question-F Part 2	**3 to >0 pts** **Regularization** Regularization with different penalty terms - Ridge - 0.5 pt, Lasso - 0.5 pt. Elastic Net - 0.5 pt, Impact - 0.5 pt	**0 pts** **No Marks**	3 / 3 pts
Question-F Part 3	**5 to >0 pts** **Hyper parameter tuning and Description** Hyper parameter tuning - (Batch size - Learning rate) - 2 pts, Description of models - 3 pts	**0 pts** **No Marks**	5 / 5 pts

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HW1 Rubric		
Criteria	**Ratings**	**Pts**
	Prediction on the Test Labels- 5 pts, Reporting the Evaluation Metric-2 pts **Comments** Good work!	
Question-G Part -2 view longer description	**3 to >0 pts** **Conclusions** Summarize the results - 1 pts, Future work - 2 pts **0 pts** **No Marks**	3 / 3 pts
		Total Points: 48

	File Name	Size	
	bitcoin_p...ction.pdf	1.19 MB	
	bitcoin_o...shots.pdf	436 KB	
	bitcoin_p...n-1.ipynb	1.67 MB	

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