CS-C3240 - Machine Learning D, Lecture, 4.9.2023-22.10.2023

Report Outline

Introduction:

- Explain the background (real-life scenario) of your ML application.
- Briefly outline the structure of this report

Problem Formulation:

- Formalize the application as an ML problem.
- Clearly explain the data points, features and labels of this ML problem.
- Explain the source of the dataset.

Methods:

- State the number of datapoints, briefly describe the dataset and/or any data preprocessing needed.
- Explain your feature selection process (no theoretical justification needed).
- Describe and explain (why?) your choice of ML model(s)/hypothesis space(s)*, e.g., linear predictors, etc.
- Describe and explain (why?) your choice of loss function(s)*, e.g., logistic loss.
- Explain the process of model validation how did you split the data into training, validation and test sets. What are the sizes of each set and why did you make such a design choice.

discuss 1 method

Results:

- Compare and discuss the training and validation errors obtained for all ML methods considered.
- Which is the final chosen method and why?
- What is the test error of the final chosen method?

Conclusion:

- Summarize the report and your findings.
- Are the results suggesting that the problem is solved satisfactorily, or might there be room for improvement?
- Explain limitations of the methods and how to further improve them.

Bibliography/References

Appendices

Your code with which you preprocessed the data, trained and evaluated the models, etc (for stage 1 you only need to include code for the progress you have made on the project so far at that stage).

Stage 2 11 Oct, 23:59 You are required to discuss at least 2 methods

Stage 1 22 Sep, 23:59 You are only required to

^{*}Choose from the ones covered in the course.