CS-C3240 - Machine Learning D, Lecture, Fall 2024

Report Outline

Introduction:

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

Problem Formulation:

- Formalise the application 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 design choice.

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

- Summarise the report and your findings.
- Are the results suggesting that the problem is solved satisfactorily, or might there be room for improvement?
- Explain the limitation of the methods and how it can be further improved.

Bibliography/References

Appendices

 Your code with which you preprocessed the data, trained and evaluated the models, etc. Stage 2 9 Oct, 23:59 You are required to discuss at least 2 methods

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