CS771: Assignment-2

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Abstract

This document contains the solutions of Assignment-2 of CS771 (Introduction of Machine Learning) by the group member mentioned above. This document submitted to the course instructor Prof. Purushottam Kar in the summer semester of 2023-24.

1   Word Sequencing

1.1   Solution of the First Question

In this problem, we need to return words corresponding to the given bigrams from a dictionary used to train the model. Essentially, this is a mapping problem. We planned to store a model as a dictionary with deduplicated, sorted bigrams as keys and the corresponding words as values. Here's how we approached the solution:

- The generate_bigrams function generates bigrams for each word in the dictionary. It returns a deduplicated and sorted list of bigrams.

- The my_fit function takes a list of dictionary words as input and returns a dictionary that maps lists of at most 5 bigrams to the corresponding lists of words.

- The my_predict function takes a list of bigrams as input and returns the list of words associated with these bigrams from the dictionary produced by my_fit. If the bigrams do not exist in the dictionary, it returns an empty list.

1.2   Solution of 2nd question

Submitted via the code submission page.