Generating Palindromes with Reverse Order Search
and
the Efficiency of Generating Palindromes by Sorting Sentences

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Abstract

We worked on the efficiency of generating palindromes which was cited as a problem in previous research. In this study, a three-clause section is created by cutting out a sentence from novels and arranging it. In addition, by searching for strings with clauses in reverse order, we tried to improve efficiency by extracting Japanese sentences that may exist as verses and reducing the number of characters.

Introduction

In the automatic generation of palindromes, the problem is the efficiency of generation, and in order to improve it, we thought it was better to reduce the number of characters.

Method

1. Acquire the 400 most popular novels from Aozora Bunko in October 2022.

2. Extract clauses from the novels acquired by using a python module called GiNZA.
    Record the roles of clauses such as subject noun clauses, predicates, adverbial clauses and adjective clauses.

3. Convert all clauses into hiragana by using a python module called pykakasi.

4a. Decide on the position to insert the clauses
    Extract only those with the same reading when read backward.

4b. Convert characters from all the novels into hiragana by using a python module called pykakasi
    Sort them backwards and record those that appeared more than 5 times.

5b. Create palindromes in the same way as in 4a.

In this study, we compare the time taken for 4a, and 4b.

Result

Processing of 4a and 4b is currently in progress, but has not been completed because it is taking such a long time

Analysis

We are writing a program so that we can check the Progress.Now we can say that 4b is faster.

Acknowledgements

References

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