



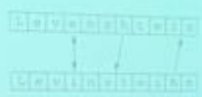
The Levenshtein distance (1965)

is a similarity measure between words. Given two words, the distance measures the number of edits needed to transform one word into another. These are those techniques that can be used for editing:

- Insertion
- Deletion
- Replacement (substitution)

The Levenshtein distance is one of the edit distances.

- The Hamming distance (only substitution)
- The Damerau-Levenshtein (D+I+R) (replacement of two adjacent characters)
- The Jaro distance (only transposition)



Cayley graph on permutations with the Hamming distance

Property 1

The distance between two permutations in $\text{Sym}_n(H)$, $n \geq 2$, is the Hamming distance.

For any two permutations π, τ of the graph $\text{Sym}_n(H)$, the distance between π and τ is the least sum of lengths of disjoint cycles transforming π into τ , where each cycle contributes a value with the length of the cycle to the Hamming distance between π and τ .

Property 2

The Cayley graph $\text{Sym}_n(H)$, $n \geq 4$, is not distance regular.







anks for your attention!

nova

Cayley graphs in coding theory

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