ALGORITHM OF GENERATING A TEXT GRAPH BASED ON SYNTACTIC RELATIONS

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Abstract

The article deals with an algorithm for generating a text graph based on syntactic relations between words. The vertices represent the words, and the arrows represent the relations between the words. This type of graph makes it possible to visualise the syntactic structure of the text being studied and visually evaluate the degree of importance for any given word via the number of edges connected to its vertex. The algorithm suggested makes it possible to generate graphs for texts characterised by a high syntactic complexity and a significant volume, which is especially relevant for solving certain practical problems of computational linguistics. We consider all the stages of graph generation in sequence. We describe in detail the method of determining coordinates of each vertex taking into account the positions of vertices already generated

References

[1] MSDN: Microsoft developers network. URL: https://msdn.microsoft.com (accessed 10.12.2016).
[2] Sintaksicheski razmechennyy korpus russkogo yazyka: informatsiya dlya pol'zovateley [syntactically marked Russian language corpus]. Natsional'nyy korpus russkogo yazyka: website. URL: http://www.ruscorpora.ru/instruction-syntax.html (accessed 10.12.2016) (in Russ.).
[3] Psevdokod (yazyk opisaniya algoritmov) [Pseudocode (algorithms description language]. URL: https://en.wikipedia.org/wiki/Pseudocode (accessed 10.12.2016).

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