The Significant Features for Search Engines Ranking Results

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Abstract. *The article describes an experiment to promote a web-resource in search results. During the experiments, the effect of quantitative indicators ranking features the position of web resources in the ranking of search engines was studied. Ranking signs for the experiments were selected using a generalized iterative algorithm for the group method of data handling.*

Keywords

Search engine rankings, GMDH, web resources, information search.

Introduction

Today it is difficult to imagine a person who would not use search engines on the Internet at least once a day. The requirements to serch engines grows depending on the development of the World Wide. Their algorithms had been changing. Continuously growing number of web resources forced the search engines developers to look for ways to speed up its algorithms. But the data processing speed is not the only or the most important problems for developers. The main objective is to create the optimal search results ranking model. It must respond to several requirements:

- respond the information needs of all users;
- provide high value completeness and accuracy of the search;
- effectively filter out search engine spam, sites clones;
- have a complex internal structure to minimize the possibility of external influence on search results.

Building the ranking model

The Google search engine [1] has been selected as a base for experimentation as the most demanded and technically equipped. It is necessary to build actual search result ranking model to get more accurate results of the experiments. For this procedure was used the technique described in [2]. The criteria described in [2] were used as ranking features.

To construct the ranking model it was used the inductive approach, namely a generalized iterative algorithm for group method of data handling [3].

Ranking model:

$$y = 0{,}76x_2 + 1{,}84x_3 + 0{,}15x_4 + 0{,}008x_7 - 1{,}9x_{11} + 0{,}012x_{22} - 14{,}8x_{27} -$$
$$- x_{28} - 14{,}33x_{35} + 2{,}4x_{40} - 0{,}3x_{41} - 8{,}8x_5x_6 + 0{,}26x_{14}x_{15}^2 + 0{,}04x_{37}x_{38}x_{39}$$

Experimental verification of the ranking features importance.

To prove the importance of getting in the ranking model features it was performed an experiment for web resource promotion. On each stage of the experiment it was artificial overstatement of certain performance parameters of the model and estimated position on Google search results.

Web-resours: mebilite.kiev.ua
Keywords: kitchens Kyiv, custom-made furniture Kyiv, wardrobes coupe Kyiv.

Web-site positions in search results before optimisation:
kitchens Kyiv - 46
custom-made furniture Kyiv - 51
wardrobes coupe Kyiv -72
Stage 1. Adding keywords in the title and meta tags.

Table 1 illustrates web-site positios for six weeks after the change.

Table 1. Schedule change positions during the six weeks after the change.

Keywords	Optimization length					
	1 week	2 weeks	3 weeks	4 weeks	5 weeks	6 weeks
kitchens Kyiv	35	32	28	26	25	25
custom-made furniture Kyiv	46	40	35	27	23	22
wardrobes coupe Kyiv	57	50	44	36	36	35

Site positions growth almost stopped on the sixth week. To further increase the positions it is necessary to optimize more parameters.

Stage 2. Placement the external links on web-resours.

Table 2 illustrates web-site positios for six weeks after the change.

Table 2. Schedule change positions during the six weeks after the change.

Keywords	Optimization length					
	1 week	2 weeks	3 weeks	4 weeks	5 weeks	6 weeks
kitchens Kyiv	25	20	18	17	15	14
custom-made furniture Kyiv	22	20	20	16	13	13
wardrobes coupe Kyiv	35	30	26	24	21	20

Stage 3. Writing the unique text with keywords for the home page.

Table 3. Schedule change positions during the six weeks after the change.

Keywords	Optimization length					
	1 week	2 weeks	3 weeks	4 weeks	5 weeks	6 weeks
kitchens Kyiv	14	11	8	6	6	6
custom-made furniture Kyiv	13	8	7	7	5	4
wardrobes coupe Kyiv	20	20	16	15	10	9

Conclusion

The experiments of web resources promotion, confirm the accuracy of the Google search engine ranking model obtained by the generalized iterative algorithm GMDH. Experiments proved that the gradual increase of the main features values, based on the ranking model, allows you to achieve high results in web resources promotion of.

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