VACANCY ANALYSIS FOR THE REGIONAL LABOUR MARKET RESEARCH

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The labour market is the most important and complex segment of the aggregate market. In addition, the amount of information about vacancies and job applicants is constantly growing. Applicants are ready to change their place of residence in order to meet their professional goals associated with career growth, possibility of new projects, higher salaries and qualifications. The need for an automated labour market analysis system is obvious. In this research an attempt was made to create a system for collecting and analyzing information about vacancies.

Nowadays employers are interested not only in professional knowledge and skills of specialists, but also in other skills (such as fluency in foreign languages, ability to work with people and solve problems independently, etc.). For effective recruitment, staff competency matrices are developed. It is a set of requirements for company employees which displays a set of competencies and their level for specific positions. However, it is difficult for a potential job seeker to quickly cover the whole range of requirements imposed by various employers. The developed system allows you to identify the most common requests for a particular city or region, which will increase the effectiveness of preparation for the interviews and as a result will contribute to successful employment. Data is collected from open Internet recruitment agencies using Web Mining technology, accumulated and analyzed [1]. The results are provided in the form of text reports and charts. The system is implemented in Python as it is a high-level programming language focused on improving developer productivity and readability of the code [2].

The created system was tested on such job posting platforms as indeed.com (Seattle) and jobs.tut.by (Moscow, Minsk and Brest). The results are displayed as bar charts. The histogram below is the result of using the system for Minsk city (Fig. 1).
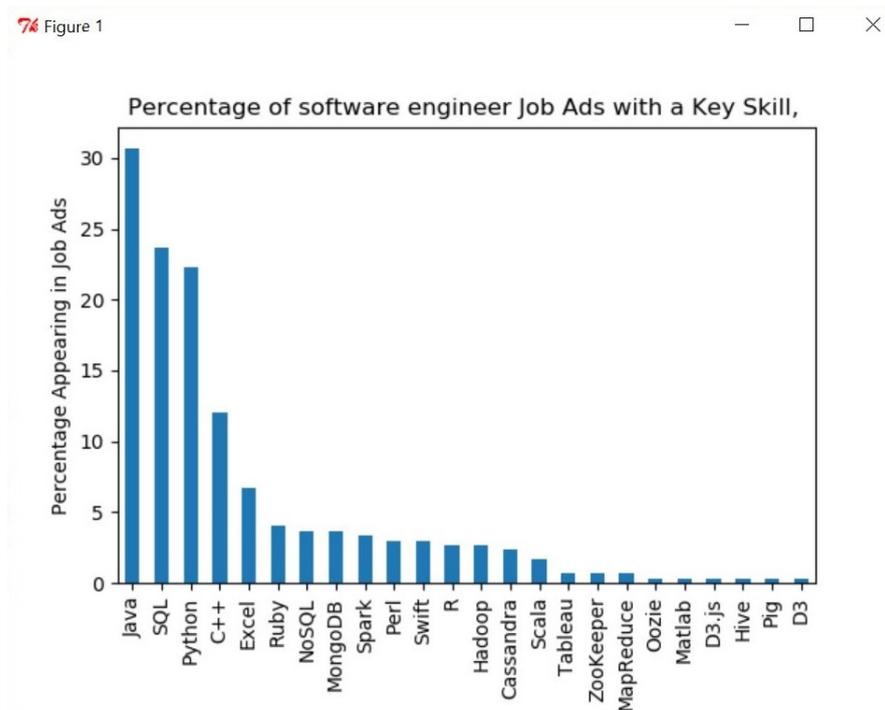

Fig. 1. Results of job market analysis (Minsk)

It can be seen that the leading positions among the most demanded skills in Minsk are held by knowledge of the Java programming language and knowledge of relational databases and SQL. There are plans to completely automate the system so it can be used by personnel specialists and other non-technical people.

[1] Mitchel, R. Web Scrapping with Python./ R.Mitchel New-York: John Wiley & Sons Inc, 2008.
[2] Lubanovic, B. Introducing Python./ B. Lubanovic. New-York; PACKT, 2017.