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CAREER IN IT: DATA SCIENTIST SPECIALIST

Data Science is a research field that studies the problems of analysis, processing of digital representation of data. It combines data processing methods in the conditions of large volumes and a high level of parallelism, statistical methods, data mining methods and artificial intelligence applications for working with data, as well as database design and development methods. Since the beginning of the 2010s, it has been considered one of the most attractive, highly paid and promising professions.

If you look at the vacancies of Data Scientist from various companies, you can see a fairly wide variety of tasks and requirements. Sometimes Data Scientist positions mean even ordinary Data Analysts. However, a certain median line is still traced.

Common tasks in the work process of Data Scientist:

1) extract, aggregate and synthesize data from various sources (structured, unstructured or mixed);

2) develop, explore and apply intellectual learning based on data obtained from the real world, provide important conclusions and successful actions based on them;

3) analyze and provide data collected in the organization;

4) design and build new processes for modeling, data mining and implementation;

5) develop prototypes, algorithms, predictive models, prototypes;

6) fulfill data analysis requests and communicate their findings and decisions.

To perform these tasks, the following skills and knowledge are mainly required:

1) discrete mathematics, statistical analysis and statistics;

2) machine learning algorithms;

3) ability to work with data warehouse (relational and non-relational), knowledge of SQL and other query languages;

4) tools for data analysis and modeling: Python (NumPy / SciPy), R, Matlab, SPSS / SAS;

5) in the case of processing large volumes of data (Big Data) are often added: Hadoop and the entire spectrum of related technologies and tools: Hive, Pig. And of course, Java programming language.

6) data visualization skills;

7) understanding the domain;

8) high level of communication skills.

The most interesting thing is that Data Scientist does not have to be able to program well, but can limit itself to tools like Matlab, SPSS, SAS, etc. Perhaps that is why developers as data analytics (Data Analyst), business analytics (Business Analyst), and other specialists of this field don’t often claim this position.

Due to the small presence in the specialty of programmers, purely technical skills, such as the ability to program, work with Big Data and databases, are very appreciated. According to Payscale.com, knowledge of Python, Java and Hadoop can add to the average salary from 5% to 14%.

Thus, the position of Data Scientist may be of interest not only to programmers, but also to specialists in applied mathematics and statistics, business intelligence and machine learning, as well as data analysts.

There are many ways to become a data researcher, but the most traditional is to get a bachelor's degree. It is worth adding that most data researchers have at least a master's degree. However, there are other ways to acquire relevant skills. Before you

begin to study a higher education program, you need to understand what skills, tools and software are most important for the area in which you are going to work.

Since data science requires knowledge of the subject area, the role of a data researcher varies by industry, and those associated with the high-tech field will need further training. For example, if you work in the field of healthcare, in the public sector or in science, you will need skills that are significantly different from those that are needed in marketing, business or education.

Those who wish to develop skills that are in demand in a particular industry are offered various interactive classes, training courses and vocational training courses that help to obtain the necessary knowledge. In addition to training courses, there are many valuable certificates in the field of Big Data that will improve your resume and become an additional argument in favor of a higher salary.

After receiving the necessary education, you will be able to qualify for the role. If you are already working in the field of IT, you can find all the opportunities for professional growth. The student should have a university degree, certificates or diplomas for taking courses. Then examine the available vacancies and highlight their common features. It can help the young specialist become a data researcher with all the necessary capabilities to acquire this knowledge, skills and experience.

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