

Data Science

Kazan (Volga Region) Federal University

Degree or qualification is awarded: **Master**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **168 960 RUB per year**

Programme webpage at the university website: <https://kpfu.ru/portal/docs/F281225711/Data.Science.pdf>

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Data science is a branch of computer science that studies the problems of analyzing, processing and presenting data in digital form. It combines methods for data processing and high level of parallelism, statistical methods, data mining methods and applications of artificial intelligence for working with data, as well as methods for designing and developing databases. Largely due to the popularization of the concept of “big data”, it is considered as a practical interdisciplinary field of activity. Moreover, a data scientist is one of the most attractive, highly paid and promising professions since the beginning of the 2010s.

The main practical goal of professional activity in data science is the detection of patterns in data and the extraction of knowledge from data. The skills required by a specialist are reflected in the intersection of areas of substantive expertise, practical experience in information technologies (hacking skills) and knowledge of mathematical statistics.

A feature of the discipline is the priority of practical applicability of the results, that is, the success of predictions, over their causality, whereas in traditional research areas it is essential to explain the nature of the phenomenon. Data science is largely based on the methods of classical statistics and involves the study of very large heterogeneous arrays of digital information and links with information technologies. Data science assumes reliance on mathematical statistics, artificial intelligence and machine learning.

The main results of the program: Graduates of the master program should receive fundamental knowledge in the field of data science and operations research and understanding of the various applications of this knowledge. Undergraduates acquire the skills of independent research work: the ability to work with the scientific literature, the ability to analyze and process data and carry out mathematical modeling in various fields, including economics, management and engineering.

Specializations within this programme