

Data analysis with R for beginners

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Abstract

Being able to analyze data and present the results of this analysis is indispensable for scientists. R is a programming language and is one of the perfect environments for data analysis. It has numerous tools to handle, analyze, and visualize different types of data, is routinely used by many scientists, and there is a large and friendly user community on the Internet.

During this course of lectures, you will learn practical aspects of statistics and data analysis using computational approaches and simulations. After taking this course, you will be able to:

- Get acquainted with the basic concepts of programming in R;
- Understand the components of a dataset, handle and prepare raw data for further analysis;
- Display and describe datasets in meaningful ways;
- Describe common methods for statistical inference and hypothesis testing, understand what data sets they can be applied to;
- Critically evaluate statistical representations in the scientific literature.