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Statistical Computing and Data Visualization

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Statistical computing and Data visualization

Brief Description

Now a days no statistical research can be done without substantial informatics support.

My presentation covers overview the computational statistics with visualization by the implication of computerization. However, the role of computational statistics in statistical education and discovery, including the big data analyses, has been under-recognized even by peer statisticians. Especially in the presence of massive data coming with more heterogeneity we need to change our statistical thinking in order to adapt classical statistics, still invaluable in the context of big data analysis, and software developments in statistics that address new challenges.

Moreover, the data which come from two or more sources and are characterized by different stochastic mechanisms may sometimes be mixed and registered together, which leads to polluted samples.

For all these cases the traditional stochastic models, suitable for primary events (the ones which actually occur) may not be appropriate for description of registered events (observed data) unless necessary modifications are introduce. The adaptation process should be based on incorporating into curriculum the topics as: exploratory data analysis(EDA) and visualization, advanced statistical modelling and forecasting hypothesis testing from randomized experiments, planning of adaptive experiments, to name only a few. They all need special teaching methods based on both statistical and computer science tools.

Similar approach can be make familiar with computationally.

My presentation covers all field Computational Statistics and the field of Data Visualization by the computational software at present and future world.

In line with the companion volumes, it contains a collection of chapters high volume of computational areana of software which are used for computational work and visualization that run the world at a glance.

Data Visualization is an active area of application and research and this is a good time to gather together a summary of current knowledge. Graphic displays are often very effective at communicating information. They are also very often not effective at communicating information.

Two important reasons for this state of affairs are that graphics can be produced with a few clicks of the mouse without any thought, and that the design of graphics is not taken seriously in many scientific textbooks.

Data visualization is more important part of computational Statistics. This part shows all computational scenario of the calculating arena by the dashboard and user covers all area at present world's computational software and describe easily how to work such kind of software with visualization.

This volume of the presentation of Computational Statistics takes Data visualization tools which provide an accessible way to see and understand trends, patterns in data, and outliers, data visualization tools and technologies are essential to analyzing massive amounts of information and making data driven decisions, the concept of using pictures is to understand data that has been used for centuries

Abstract

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under-recognized even by peer statisticians. Especially in the presence of massive data coming with more heterogeneity we need to change our statistical thinking in order to adapt classical statistics, still invaluable in the context of big data analysis, and software developments in statistics that address new challenges. Moreover, the data which come from two or more sources and are characterized by different stochastic mechanisms may sometimes be mixed and registered together, which leads to polluted samples. For all these cases the traditional stochastic models, suitable for primary events (the ones which actually occur) may not be appropriate for description of registered events (observed data) unless necessary modifications are introduce.
The adaptation process should be based on incorporating into curriculums the topics as: exploratory data analysis(EDA) and visualization, advanced statistical modelling and forecasting hypothesis testing from randomized experiments, planning of adaptive experiments, to name only a few. They all need special teaching methods based on both statistical and computer-science tools. Similar approach can be make familiar with computationally.
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