Title: *Visual Analytics – Hands on*
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ABSTRACT. In the last decades, our daily life has been characterized by a sudden diffusion of information systems. Digital devices we usually interact with, can store and process surprisingly amounts of data in a short time. This phenomenon has created the necessity of analyzing the huge amount of digital information that surrounds us, with the aim of understanding complex phenomena and efficiently handling the related processes, in various sectors of science and industry.

Visual Analytics is "the science of analytical reasoning supported by interactive visual interfaces" [Thomas and Cook 2005]. It aims to facilitate the data analytics process by producing pictorial representations of complex data, so that analysts can visually inspect them, interact with them, draw insights, and take decisions. Visual analytics finds application wherever there is a need to analyze data. It is essential in many fields, such as Business Intelligence, security, biology, medicine, health, astronomy, and many others.

This course gives an overview of the main processes, tools, and techniques for visually representing data, with a particular focus on the visualization of networks. From a practical point of view, this course focuses on the design and creation of visualizations (reports) with Tableau for conducting exploratory analysis and deriving insights from collections of data. Further software for network visualization in specific application scenarios will also be discussed.

PROGRAM

- Introduction to visual analytics.
- Design and creation of interactive visualizations with Tableau.
- Use cases and practical examples.
- Advanced topics on network visualization.