DATA VISUALISATION

Course Workload		Assessment form (examination/ graded test/ ungraded test)
ECTS	Hours	
3	108	Ungraded test

This course provides an introduction to key design principles and techniques for interactive data visualization. The main objectives of this course are to understand how visual representations can help you analyze and understand complex data, how to design effective visualizations, and how to create your own interactive visualizations using modern web frameworks. In this course, you will learn how the human visual system processes and perceives images, design best practices for the visualization, tools for visualizing data from various fields, and programming interactive web visualizations using 3D.

Course structure:

1. INTRODUCTION AND BASIC CONCEPTS IN VISUALIZATION

    1.1. History of the development of visualization. Basic concepts and directions in visualization. Data: data abstractions and their types. Visualization alphabet.

2. BASICS OF DESIGNING VISUALIZATION SOLUTIONS

    2.1. Sketching and design of visualization solutions. Visual perception of a person. Awareness of images. Perception of color. Tasks: abstractions of tasks and ways of setting them. Human-computer interaction.

3. VISUALIZATION OF ABSTRACT AND SPATIAL DATA

    3.1. Data visualization. Networks and graphs. Visualization of text and documents. Visualization of spatial data. Volumes, flows, maps.

4. VISUALIZATION AND SOCIETY

    4.1. Social visualization. Analysis of social data. Visualization for society. Visualization and art. Visualization as an art.