UNIVERSITÀ DI PISA

VISUAL ANALYTICS

SALVATORE RINZIVILLO

Anno accademico	2019/20
CdS	DATA SCIENCE AND BUSINESS INFORMATICS
Codice	602AA
CFU	6

Moduli	Settore/i	Tipo	Ore	Docente/i
VISUAL ANALYTICS	INF/01	LEZIONI	48	SALVATORE RINZIVILLO

Learning outcomes

Knowledge
The trained student will acquire knowledge and skills to design and implement an effective visual representation of data and models

Assessment criteria of knowledge
The student should prepare a project presenting a case study of the realization of a visual interface to explore and analyze a dataset.
The project should define a set of hypothesis and it should demonstrate how they are verifiable through the visual exploration

Skills
Expertise in data visualization libraries for the web, like d3.js, bootstrap, vue.js, plotly.js, node.js

Assessment criteria of skills
The students should exploit the technologies presented during the class to realize an effective visualization for the web.

Prerequisites
Basic knowledge of programming languages for the web: Javascript, HTML, CSS

Teaching methods
The class will be divided into two parts: i) theory of visualization and congnition; ii) technologies for visualization for the web

Syllabus
Theory of Visualization

- Taxonomy of different types of data visualization: hierarchies, relational data, temporal data, spatial data, unstructured data (text)
- Visual Analytics Process
- Strategies and best practices for Effective data visualization
- Discussion of Case Studies

Technologies for visualization

- Overview of development environments and visual libraries
- Design of a visual analytics project
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Bibliography

- VisMaster - Mastering the information age
- Design for Information. Isabel Meirelles, Rockport Publisher,2013.
- Interactive Data Visualization for the Web, Scott Murray, O'Reilly Atlas, 2013

All didactic material is availavle at: http://didawiki.cli.di.unipi.it/doku.php/magistraleinformaticaeconomia/va/start
Execercise and code available on GIT: https://github.com/VA602AA-master

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Non-attending students info

Non attending students can follows the class by the material published on the web page of the course

Assessment methods

Realization of a project and oral discussion of the result.
The student should prepare a project presenting a case study of the realization of a visual interface to explore and analyze a dataset.
The project should define a set of hypothesis and it should demonstrate how they are verifiable through the visual exploration

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