Data visualization's Tools and Techniques in Digital Humanities

Ben–Gurion Research Institute for the Study of Israel & Zionism

Module's Description: This methods course allows students to explore how particular digital humanities tools and techniques. The course focuses on particular tools and methods, giving students a chance to use, question, and reflect on how these tools afford knowledge. During the course students will be introduced to state-of-the-art tools and DH methods. Students will be guided exploring tools that could help them answer research questions in the humanities. It is a course in the 'data processing' learning pathway and teaches students how tools are developed within digital humanities and how their utility and impact can be assessed. In this course unit we also focus on students' own critical reflection on their own use of tools and methods, as part of their preparatory work on their MA studies.

Objectives of the module: Upon successful completion of the course unit, students are able to: critically examine Digital Humanities tools and methods (using tool criticism) and present their critical examinations. They are furthermore able to visualize data for a typical digital humanities research question, including deciding which visualization type is the most suitable (given the dataset and the intended audience) and produce the visualization (i.e. converting the numeric or textual dataset into a graphical representation).

Learning outcomes of the module: On successful completion of the module, the student should be able to:

·   Understand Digital Humanities and its importance

·   Understand data and distinguish between data types (structured, un-structured and semi-structured)

·   Be able to identify different data sources

·   Being capable of downloading data from various sources

·   Get familiar with different digital humanities tools and research methods

·   Introduction productively with the Power BI, Voyant, OpenRefine, Recogito, Transkribus, CATMA, Palladio.

·   Import and connect to simple data sources, including CSV files and Excel workbooks

·   Create rich, interactive reports and outputs to discover data related patterns and support analysis

· Introduction to AI using ChatGPT

Attendance regulation: obligatory.

Teaching arrangement and method of instruction: The course will be conducted through formal lectures followed by practical workshop where the students will build a real report based on their researched data.

Assessment:

·	Participation	10%
·	Course assignments	10%
·	Final project	80%
		100%

Module Content, schedule and outlines

Lesson 1 & 2:

Course Objectives

Assessment

Introduction to Digital Humanities

Lesson 3:

Text-Mining - Explore a text or set of texts with Voyant

Lesson 4:

Network Analysis - Identify or create a dataset of interest and explore it using a network analysis tool – Palladio

Lesson 5:

Data wrangling - data cleanup and transformation to other formats using OpenRefine

Lesson 6:

Visualizing, Mapping, and Annotating Ancient Texts using Recogito - a software platform that facilitates annotation of text and images.

Lesson 7:

Text recognition, image analysis and structure recognition of historical documents using Transkribus.

Lesson 8:

Introduction to the three interactive modules of CATMA (Computer Aided Textual Markup and Analysis):

- enabling textual markup and markup editing

- an analyzer incorporating a query language and predefined functions

- a query builder that allows users to construct queries from combinations of pre-defined questions

Lesson 9:

Turning large amount of data into meaningful and insightful visualized report using Microsoft Power BI software

Lesson 10:

Introduction to AI using ChatGPT

Lesson 11:

Summaries, Conclusion, Assessment project guidelines