

HUMA5630 Spring 2024

Course Instructor: Qiuzi Guo Lecturer, Division of Humanities

Email: hmqzguo@ust.hk

Office Hours: Mondays: Mondays: 14:00-16:00 (by appointment)

Office: Room 3385 / IC Learning Space, G/F of Library

Course Description:

The course introduces methods and tools of the Digital Humanities (DH) as they can be used in literary, historical, art historical, and cultural studies. Students will learn how to acquire humanities data, and apply data analysis, text mining, and visualization tools to explore a variety of research questions pertinent to the use, sharing, and presentation of humanities data. Students will also investigate the impact of artificial intelligence (AI) within the humanities by learning to integrate AI tools and methodologies into their research projects.

Intended Learning Outcomes:

- Critically discuss DH projects and DH tools and methods being used.
- Know how to use multiple methods to acquire humanities data, conduct basic text analysis, make data visualization and present data in publishing platform.
- Develop the skill to craft effective and precise prompts for AI tools, enhancing the quality and efficiency of humanities research and data analysis
- Design, develop and present a dynamic digital humanities project.

Assignments:

- **Attendance and Participation 15%**

You are required to attend classes. One point will be deducted for each absence, up to 10 points.

Active participation is highly valued. Engage thoughtfully in classroom and Canvas discussions, demonstrating your learning and contributing to the online dialogue. Effective participation and responses to Canvas posts can contribute up to 5 points.

- **Digital Humanities Project Critique 20%**

Choose any DH project for evaluation and prepare a 7-minute presentation on your findings. Following your presentation, you must submit the presentation file. A list of potential DH projects will be provided for your consideration, although you are also free to select a project discovered through your own research.

- **Humanities Data Analysis Report 25%**

Select an open cultural dataset and employ AI tools like ChatGPT to assist you in coding and analyzing the data. Your assignment is to create a data analysis report within a Jupyter Notebook. This report should integrate executable code and a written narrative that together articulate your analytical process and insights. Your analysis can be enhanced by using Python libraries for data manipulation and visualization. You may choose from suggested datasets such as those from the M+ Museum, MoMA, or the HKUST Library Collection, or find another dataset that suits your interests.

- **Final Group Project 40%**

1. **Team Formation:** Students should form teams of 4-5 to collaborate on the final project. Each team will utilize the skills acquired throughout the course to craft research questions, compile or generate a dataset, and apply digital humanities methodologies to analyze and interpret this data.
2. **Project Options:**
 - a. **A digital exhibition:** Create a website showcasing individual research findings of group members, integrated with digital multimedia elements.
 - b. **Data visualization analysis:** Develop a project that performs and visually communicates a fundamental analysis of a humanities dataset.
 - c. **Historical StoryMap:** Design an interactive StoryMap that narratively and visually chronicles historical events.
 - d. **Literary text analysis:** Conduct a detailed text analysis of a selected literary work, identifying themes, patterns, or other significant elements.
 - e. **Considering the limited time, in the final presentation and submission, the project can be created as a basic framework. The team needs to elucidate the future enhancement plans.**
3. **Final Project Presentation:** Teams will present their projects in class. The presentation should articulate the project's objectives, methodology, initial findings, and a roadmap for future work. Each team will submit their presentation materials (PowerPoint or PDF) after their oral presentation.
4. **Submission Guidelines:** The format for the final project submission will depend on the nature of the project.

Notes:

- Recommended: BYOC (Bring your own computer). The class will take place in the Computer Barn. PCs will be provided as a back-up choice, but files cannot be saved after shutting down the computer according to the policy of ITSC.
- No prior knowledge of Python or digital tools is required.
- The information about software, tools, and web-based applications in the syllabus may change based on the specific learning objectives. All technical details will be announced on Canvas before each class.
- AI tools, including ChatGPT, are encouraged for assistance in coding and data analysis tasks. Understanding and crafting effective prompts is essential for leveraging AI capabilities effectively

Weekly Topics:

Week 1 Friday 2 Feb Welcome and Introduction

Review the syllabus, introduce the goal, assignments of the class, timeline for designing the project, and discuss the key concepts and sample projects in the field of digital humanities.

- Readings

Kirschenbaum, Matthew.

["What Is Digital Humanities and What's It Doing in English Departments?"](#)

Week 2 Friday 9 Feb What is Humanist Data?

Identify the relationship between data and humanities research, introduce the multiple ways of digitalizing the texts and objects, and explore some project examples of digitization.

Tutorial: Python for beginners (basic 1&2)

- Readings

Pomerantz, J. (2015). Introduction. in *Metadata* (pp. 1-18). MIT Press,

Christof Schoech: [Big? Smart? Clean? Messy? Data in the Humanities](#)

Week 3 Friday 16 Feb Acquiring Humanist Data

Discuss the role of humanities in the age of big data; what's the relationship between big data and digital humanities, and introduce the ways of acquiring humanist data for research.

Tutorial: Python for beginners (basic 3 & 4)

Scrape social media data; acquire data from museums via public API

- Readings

Milligan, I., & Warren, R. (2018). Big Data and the Coming Historical Revolution: From Black Boxes to Models. In *Big Data in the arts and humanities: Theory and practice* (pp. 65–75).

Abigail Walker: [Getting Data for Digital Humanities With APIs](#)

Week 4 Friday 23 Feb Analyzing Humanities Data I: From Data to Research Questions

Introduce how to analyze the structured dataset and develop humanities research questions based on data analysis. We will focus on transforming quantitative and qualitative data patterns into compelling inquiries that drive further exploration in the humanities field.

Tutorial: Python for beginners (basic 5 & 6)

Analyzing museums' open data with Python

- Readings

Karsdorp, F., Kestemont, M., & Riddell, A. (2021). [Quantitative Data Analysis and the Humanities](#) in *Humanities Data Analysis: Case Studies with Python*. Princeton University Press.

Week 5 Friday 1 March Analyzing Humanities Data II: Enhancing Research with AI Tools

We will explore the incorporation of AI tools such as ChatGPT into our analysis of humanities data. We will focus on crafting effective prompts to guide AI in writing code, acquiring, processing, cleaning, and analyzing data. We will learn how to effectively communicate with AI tools to streamline these processes, ensuring more efficient and insightful data analysis

Tutorial: Crafting prompts for humanities data analysis

Week 6 Friday 8 March Introduction to Text Analysis

Discuss the “quantitative turn” in humanities research, and introduce text analysis project examples. We will experiment with the text analysis tools and discover the word frequency and collocation in the given text.

Tutorial: Text analysis tools

- Readings

Drucker, J. (2021). Data Mining and Analysis. In *The Digital Humanities Coursebook: An introduction to digital methods for research and scholarship* (pp. 110–129). Routledge, Taylor & Francis Group.

Ted Underwood: [Seven ways humanists are using computers to understand text.](#)

Week 7 Friday 15 March Data Visualization for Digital Humanities

Introduce the methods of data visualization, analyze the data visualization project examples, and discuss how to visualize the research outcomes.

Tutorial: Data Visualization tools

- Readings

Manovich, Lev. “What Is Visualization?” Manovich.Net, 2012.

Week 8 Friday 22 March Digital Publishing: Making Your Own Website

Introduce the ways of online publishing (website, blog, social media platform)

Tutorial: Using Streamlit to design and deploy a website, with publication facilitated through GitHub

Week 9 Friday 5 April Storytelling with Virtual Reality

This session will immerse us in the world of digital storytelling through Virtual Reality (VR), focusing on the preservation and presentation of cultural heritage. We will explore the use of photogrammetry apps to scan objects and artifacts, transforming them into interactive 3D models for VR environments. This innovative approach allows us to create compelling and immersive narratives that bring cultural heritage to life in the digital realm.

- Readings

Rühse, V. (2017). The Digital Collection of the Rijksmuseum. In *Museum and archive on the move: Changing Cultural Institutions in the Digital Era* (pp. 37–56). De Gruyter.

Project: VR tour <https://yulanvrtour22.hksyu.edu/>

Week 10 Friday 12 April The Design of Digital Humanities Project

Introduce the digital project lifecycle, discuss the workflow of designing a new project, and the principles for collecting and protecting data.

Q & A

Provide advice to students on how to select the topic, develop the research question, acquire the data and design their final project.

Week 11 Friday 19 April Mapping Space and Time: Story Maps and Timeline

Introduce the way of using StoryMaps to create a spatial narrative, and develop a timeline on web publishing platform.

Tutorial: Creating StoryMaps using Esri Story Maps

- Readings

[Gaps in the Map: Why We're Mapping Everything, and Why Not Everything Can, or Should, be Mapped, Shannon Mattern, September 18, 2015](#)

[StoryMaps and the Digital Humanities](#)

Week 12 Friday 26 April Tutorial on Final Project Design

Introduce the digital technology used by GLAM (galleries, libraries, archives, and museums) to manage and curate digital collection.

- Readings

Rühse, V. (2017). The Digital Collection of the Rijksmuseum. In *Museum and archive on the move: Changing Cultural Institutions in the Digital Era* (pp. 37–56). De Gruyter.

- Project to explore

[Harvard FAS CAMLab Digital Luoyang](#)

Week 13 Friday 3 May Final Project Presentation I

Presentations and discussion of each project.

Week 14 Friday 10 May Final Project Presentation II

Presentations and discussion of each project.

Final Discussion: Discuss the impact and challenges of digital humanities on previous humanities research. Is it data or research question is the core of the digital humanities project? As humanities scholars, how do you critically view the bias shown in the data collection, analysis, and presentation?