AI in Digital Humanities and Cultural Heritage Preservation

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BolDH - Digital Humanities made in Bologna
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WHAT IS DHDK?

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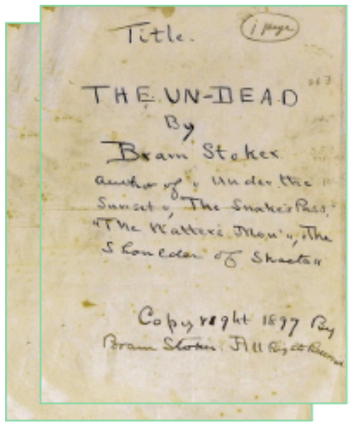
DHDK - What is it?

Digital humanities (DH) is an area of scholarly activity at the intersection of computing or digital technologies and the disciplines of the humanities. It includes the systematic use of digital resources in the humanities, as well as the reflection on their application[1][2].

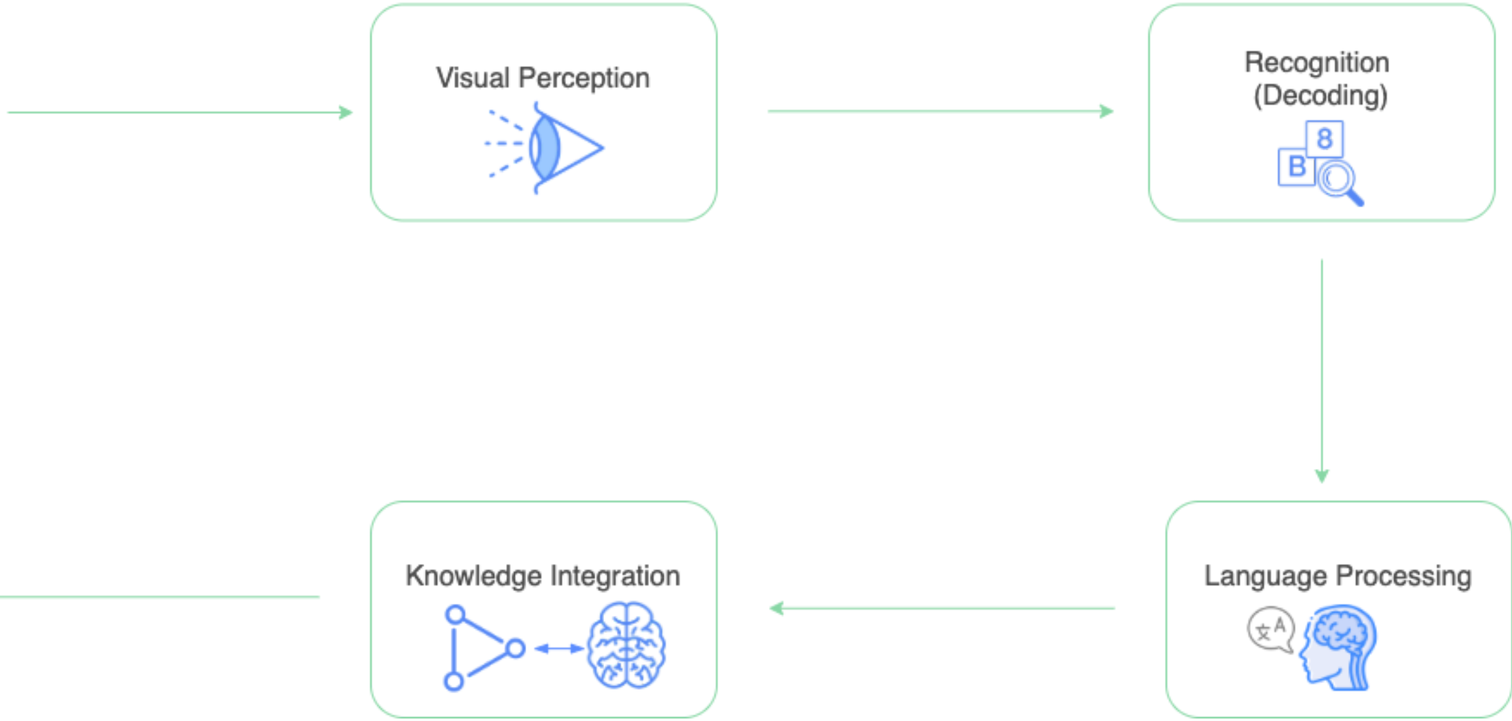
DH can be defined as new ways of doing scholarship that involve collaborative, transdisciplinary, and computationally engaged research, teaching, and publishing[3].

- UniBo DHDK - BolDH
- Stanford Digital Humanities

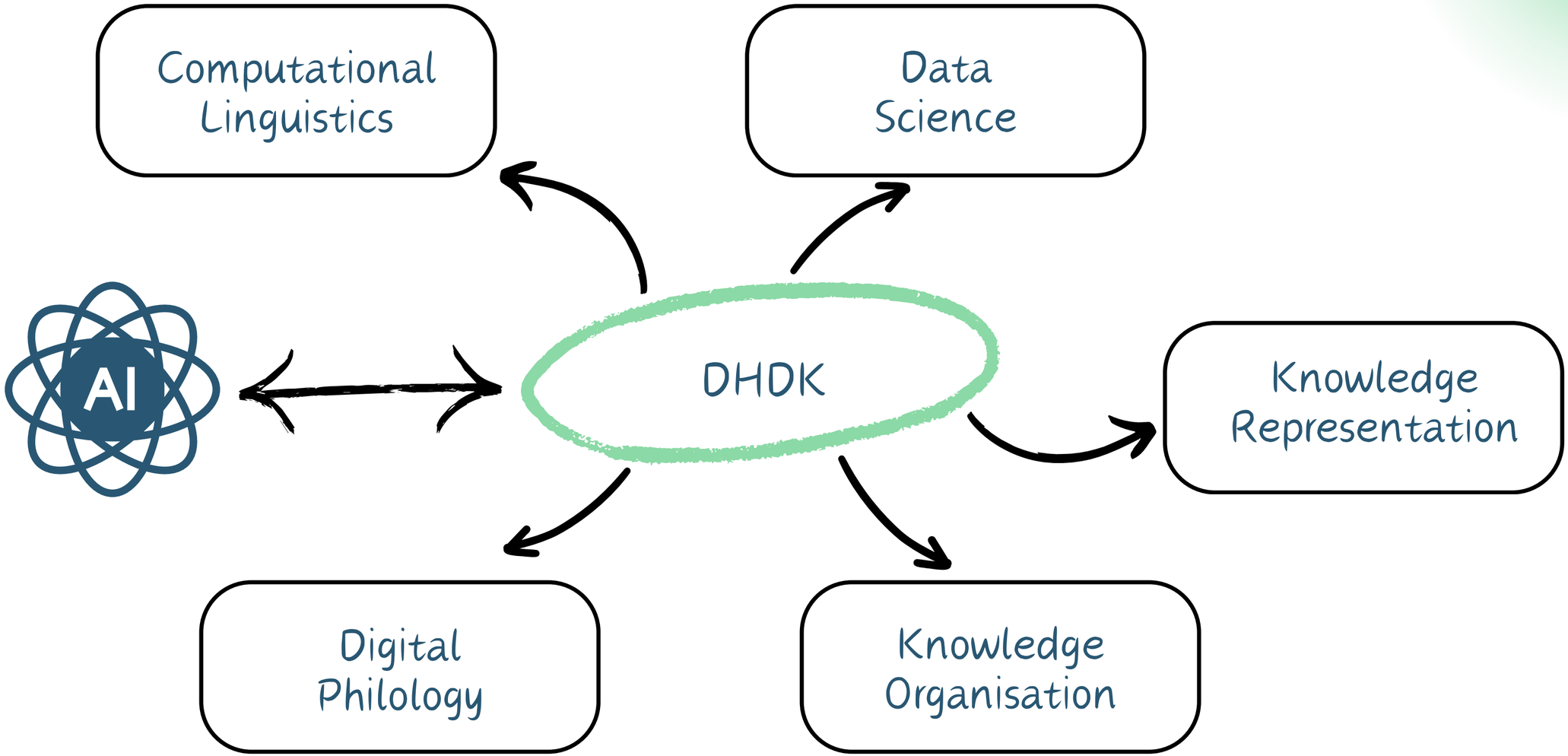
DHDK - What is it?



https://lostmediawiki.com/The_Un-Dead_%28partially_found_original_Dracula_manuscript;_1897%29

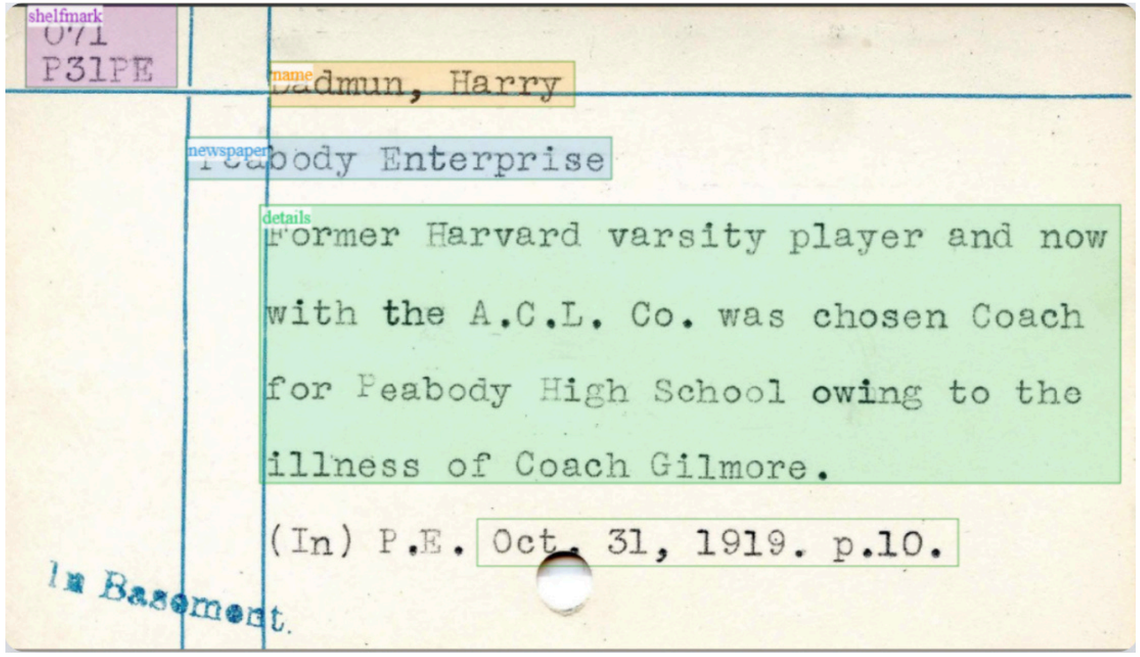


DHDK - What does it have to do with AI?



Digital Philology

Digital Philology employs technical solutions for studying, manipulating, and publishing literary texts. Rooted in humanities, it takes an interdisciplinary approach to problem-solving. A notable output is the creation of Digital Scholarly Editions, with Semantic Web technologies enabling the development of enhanced applications known as Semantic Digital Editions.



https://d384mgsom18y3m.cloudfront.net/products/efficiency-digitization.jpg

TL;DR

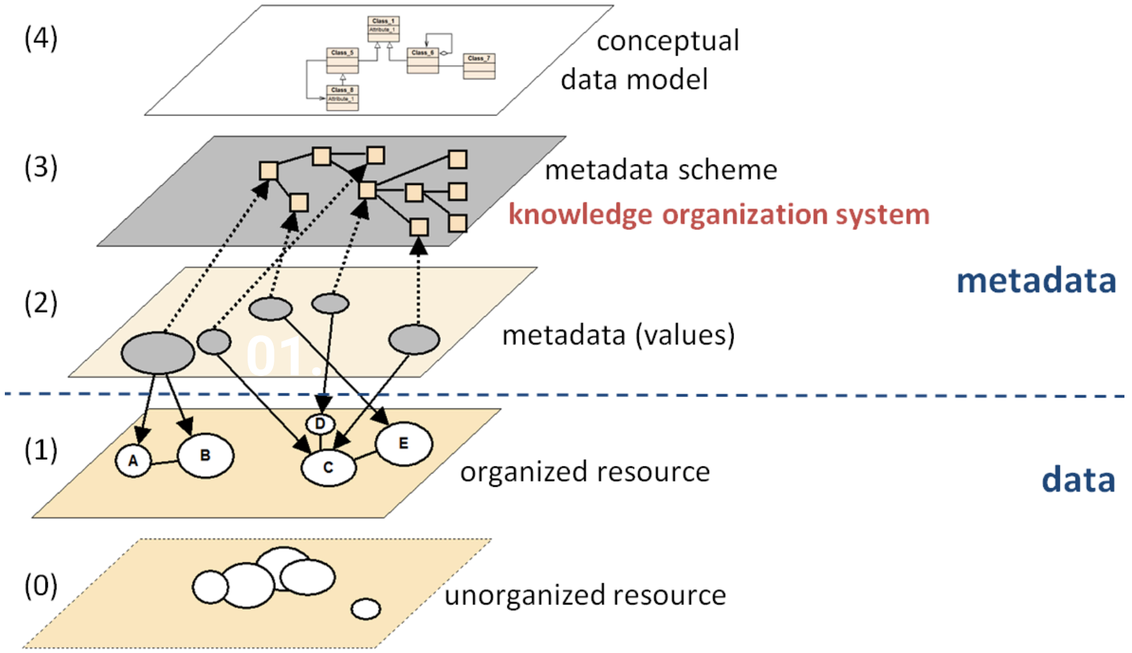
- Textual analysis with digital tools
- Creating digital editions
- Digital textual criticism

PROJECTS

- Europeana
- Transkribus

Knowledge Organisation

Library and Information Science (LIS) focuses on the organization of information within bibliographic records. In contrast, Knowledge Organization spans beyond LIS, involving various disciplines, institutions, languages, symbolic and conceptual systems, as well as diverse theories, literatures, and genres.



https://full.nkp.cz/nkkr/knihovna142_suppl/1402sup01.htm

TL;DR

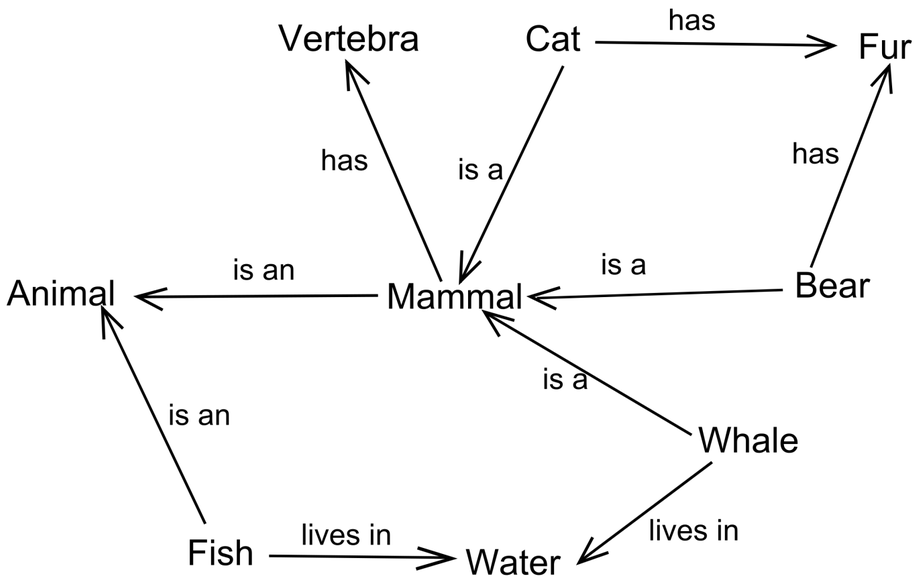
- Developing categories for subjects
- Assigning keywords or tags to pieces of information

PROJECTS

- Ragu Project
- Stanford Encyclopedia of Philosophy

Knowledge Representation

Knowledge Representation involves formally structuring information to enable computers to tackle complex tasks. It serves as the foundation for the Semantic Web and plays a crucial role in Ontology Engineering. These research domains, along with their associated methodologies and theories, extend their application to the Arts and Humanities sector, as well as the Cultural Heritage domain encompassing Libraries, Museums, and Archives.



https://www.google.com/url?sa

TL;DR

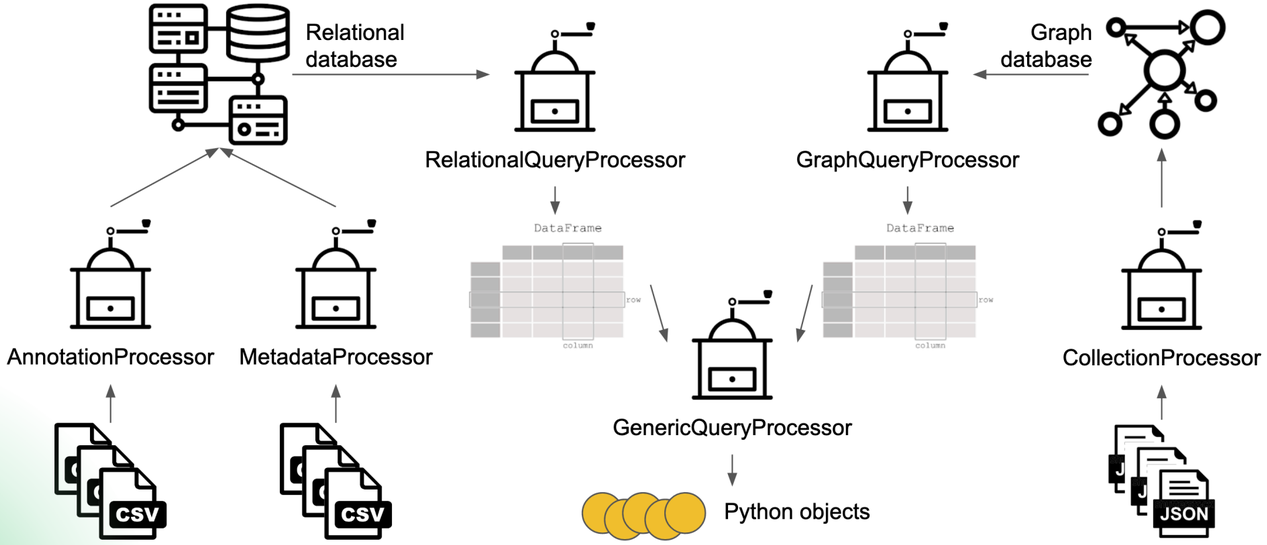
- Focused on how knowledge can be formally structured
- Facilitate reasoning and decision-making by computers

PROJECTS

- FRED

Data Science

Data Science comprises various methods and techniques aimed at manipulating and extracting knowledge from data. Instead of being confined to a specific research domain, the techniques within the Data Science category find applications in diverse areas such as Linguistics, Library and Information Science. The distinctive feature of the /DH.arc research centre lies in its emphasis on data, setting it apart from other technological applications.



https://github.com/comp-data/2022-2023/tree/main/docs/project

TL;DR

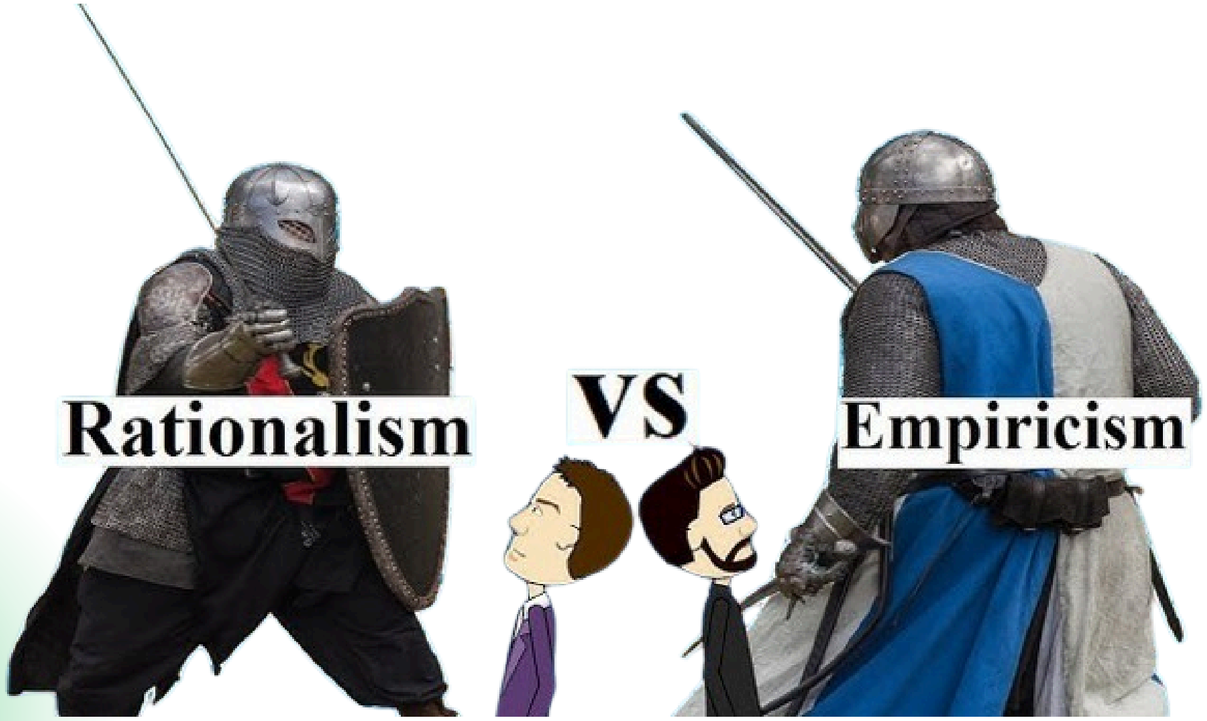
- Analytical leverage on long-standing questions
- Statistical reasoning about the causal relationships

PROJECTS

- Open Citations

Computational Linguistics

Computational Linguistics is a field dedicated to investigating the application of computational methodologies to address various linguistic questions. The primary objective is to employ these approaches to generate statistical analyses and models derived from natural language, contributing to a deeper understanding of linguistic phenomena through the lens of computational tools and techniques.



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TL;DR

- The intersection of CS and linguistics
- Processing of natural language using computational methods

PROJECTS

- Norman AI
- Punchlines AI

Thanks for Listening!

References

1. Drucker, Johanna (September 2013). Intro to Digital Humanities: Introduction. UCLA Center for Digital Humanities. Retrieved December 26, 2016.
2. Terras, Melissa (December 2011). Quantifying Digital Humanities (PDF). UCL Centre for Digital Humanities. Retrieved December 26, 2016.
3. Burdick, Anne; Drucker, Johanna; Lunenfeld, Peter; Presner, Todd; Schnapp, Jeffrey (November 2012). Digital_Humanities (PDF). Open Access eBook: MIT Press. ISBN 9780262312097.
4. https://dharc-org.github.io/boldh/