RESEARCH TOOLS AND OPEN SCIENCE AT THE KHI

Kunsthistorisches Institut in Florenz

Digital Humanities Lab

Alessandra Failla, Chiara Capulli and Rafael Uriarte

DH INITIATIVES

DH Days

How to use AI and integrate it into your research.

Creating digital platforms for research and collaboration.

General discussions on Digital Humanities.

Discussing specific research challenges and brainstorming project ideas.

Reading Group - AI and creativity

Co-organized with Hana Gründler.

Discuss key developments and seminal texts shaping the field.

Open to everyone, regardless of background or expertise.

Self-contained sessions.

OPEN SCIENCE

Kunsthistorisches Institut in Florenz

Digital Humanities Lab

Seminar: Research Tools and Open Science at the KHI

CONTENT
OVERVIEW

- What is Open Science?
- Open Science @ MPG
- Open Science: Benefits
- Open Science: Key Components
- Open Access
- Open Research Data
- Focus: Persistent Identifiers
- Focus: Data Licensing

WHAT IS **OPEN SCIENCE?**

Transparency

Making research visible

Sharing

Making research accessible and usable

Inclusivity

Involving and crediting more contributors to research

*https://www.cos.io/open-science

OPEN SCIENCE:
BENEFITS

Enhance **access to research**

Innovation discovery and **sustainability**

Visibility, collaboration and **inclusivity**

Fair access to resources

Stronger **accountability**

OPEN SCIENCE:
KEY COMPONENTS

Open Access
Unrestricted and free of cost online access to scholarly research

Open Research Data
Freely reusable data to ensure verification, reproducibility, and collaboration.

Open Source
Free tools and software to foster collaboration and innovation

Open Process
Transparent workflows for replicable research

Open Review
Transparent peer review to improve quality and credit reviewers

Open Citizen Science
Public involvement in research to democratize science

KEY COMPONENTS:

OPEN ACCESS

Unrestricted and free of cost online access to scholarly research.

Equal Access
Removes financial, technical, and legal barriers.

Better Use of Funds
Stops double payments to researchers and publishers

More Visibility
Increases author impact and reach.

Encourages Sharing
Supports transparency and re-use of knowledge

KEY COMPONENTS:
OPEN ACCESS

The European Commission supports open access, specifically in its funding programmes:

Horizon Europe*

EU's key funding programme for research and innovation until 2027.

Horizon's Open Science Policy

"Mandatory open access to publications and open science principles are applied throughout the programme"

*https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

KEY COMPONENTS:
OPEN RESEARCH DATA

“Open research data refers to the data underpinning scientific research results that has no restrictions on its access, enabling anyone to access it.”*

FAIR principles

- **Findable**
- **Accessible**
- **Interoperable**
- **Reusable**

Data Management Plan
Encouraged to handle data according FAIR principles.

*https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/our-digital-future/open-science/open-science-monitor/facts-and-figures-open-research-data_en

KEY COMPONENTS:
OPEN ACCESS

MPG's support for Open Access publishing

- MPG Open Access Journal Finder: https://oapublishing.mpdl.mpg.de/journals/
- MPDL Arrangements: https://www.mpdl.mpg.de/en/services/service-catalog/oa-goldpublishing
- MPG.PuRe: https://pure.mpg.de/
- DOI Service: https://doi.mpdl.mpg.de/

Additional Resources

- Directory of Open Access Journals (DOAJ): https://doaj.org

KEY COMPONENTS:
OPEN RESEARCH DATA

MPG Services

Edmond: https://edmond.mpg.de/

Edmond is a research data repository where Max Planck researchers from all disciplines can store completed datasets with open access. It offers scientists the ability to create citable research objects.

RDMO: https://rdmo.mpdl.mpg.de/

RDMO for MPG supports Max Planck researchers with the systematic planning, organisation and implementation of the data management throughout the course of a research project.

FOCUS:
PERSISTENT IDENTIFIERS

Persistent identifiers ensure long term accessibility and citability

DOI

Digital Object Identifier

ORCID

Open Researcher and Contributor ID

ROR

Open Persistent Identifiers for Research Organizations
https://ror.org/02967z527d

How to request a DOI?

MPG DOI Service: https://doi.mpdl.mpg.de/

Max Planck researchers can assign DOIs to their scientific output.
Service integrated in Edmond, MPG.PuRe, and Keeper.
Individual DOI request is also possible via the DOI Service.

FOCUS:
DATA LICENSING

Reusability

Clear data licensing of publications and datasets allows to define clear conditions of reuse.

Use the least restrictive license to maximize reuse.

Creative Commons

CC Licenses are widely used in research.

- **PDM** (Public Domain Mark)
- **CC0** (No Rights Reserved)
- **CC-BY** (Attribution)
- **CC-ND** (No Derivatives)
- **CC-NC** (Non-Commercial)
- **CC-SA** (Share Alike)

OPEN SCIENCE @ MPG

KEY INITIATIVES

Open Science in Practice: https://osip.mpdl.mpg.de/

Max Planck Digital Library Open Science Services: https://osip.mpdl.mpg.de/open-science-services/

PhD-Net Open Science Working Group: https://www.phdnet.mpg.de/phdnet/who/workgroups/open-science-group

Open Science Ambassadors: https://osambassadors.mpdl.mpg.de/

Open Science Summer School: https://osip.mpdl.mpg.de/lmu-mpg-open-science-summer-school-2024/

SOURCES

- https://www.cos.io/open-science
- Factsheet: Open science in Horizon Europe
- https://snd.se/en/manage-data/prepare-and-share/FAIR-data-principles
- https://mpdl.github.io/FAIR-Data-Management/about.html
- https://research-and-innovation.ec.europa.eu/strategy/strategy-research-and-innovation/our-digital-future/open-science/
- open-science-monitor/facts-and-figures-open-research-data_en
- https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en
- https://osip.mpdl.mpg.de/
- https://osambassadors.mpdl.mpg.de/

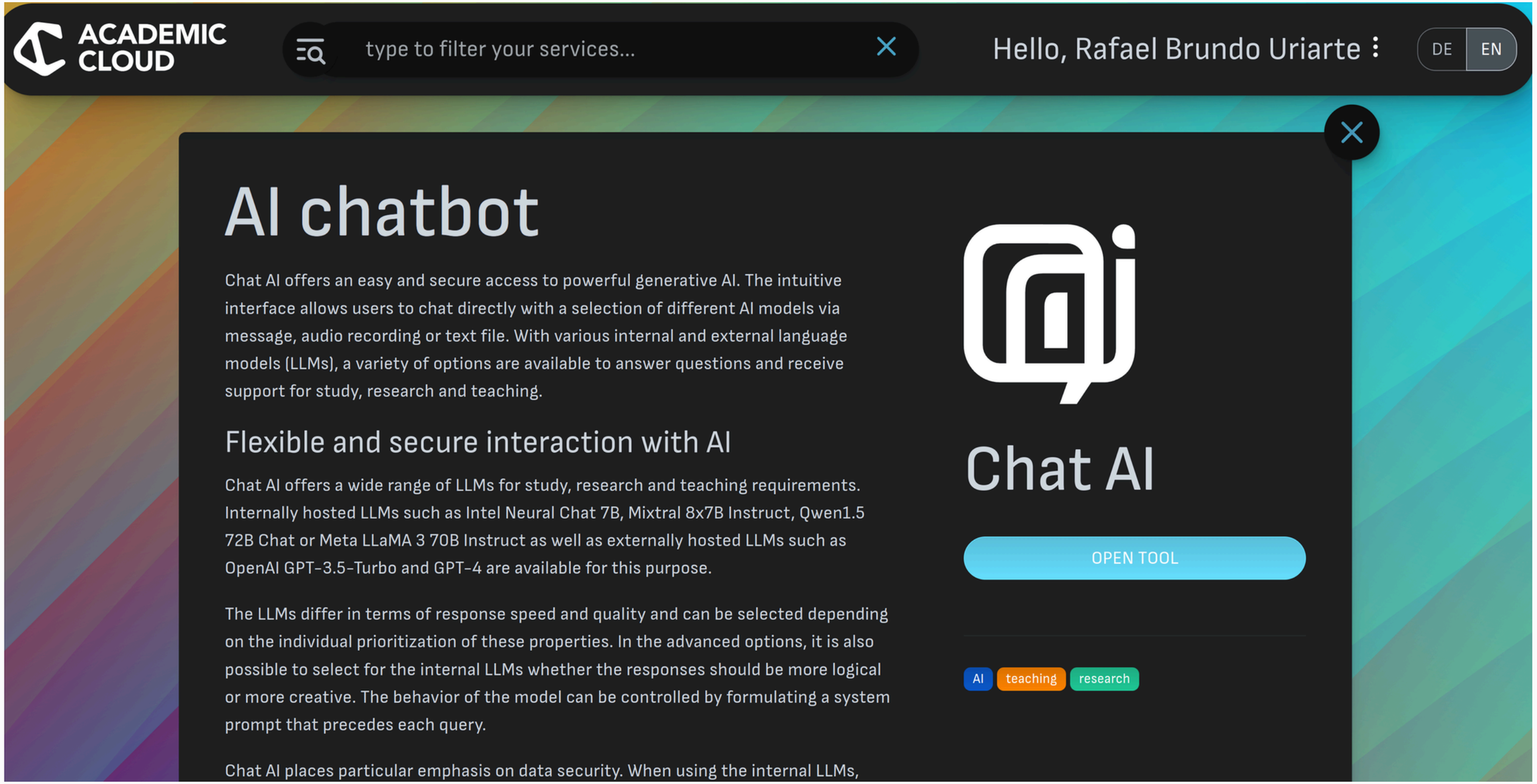
RESEARCH TOOLS

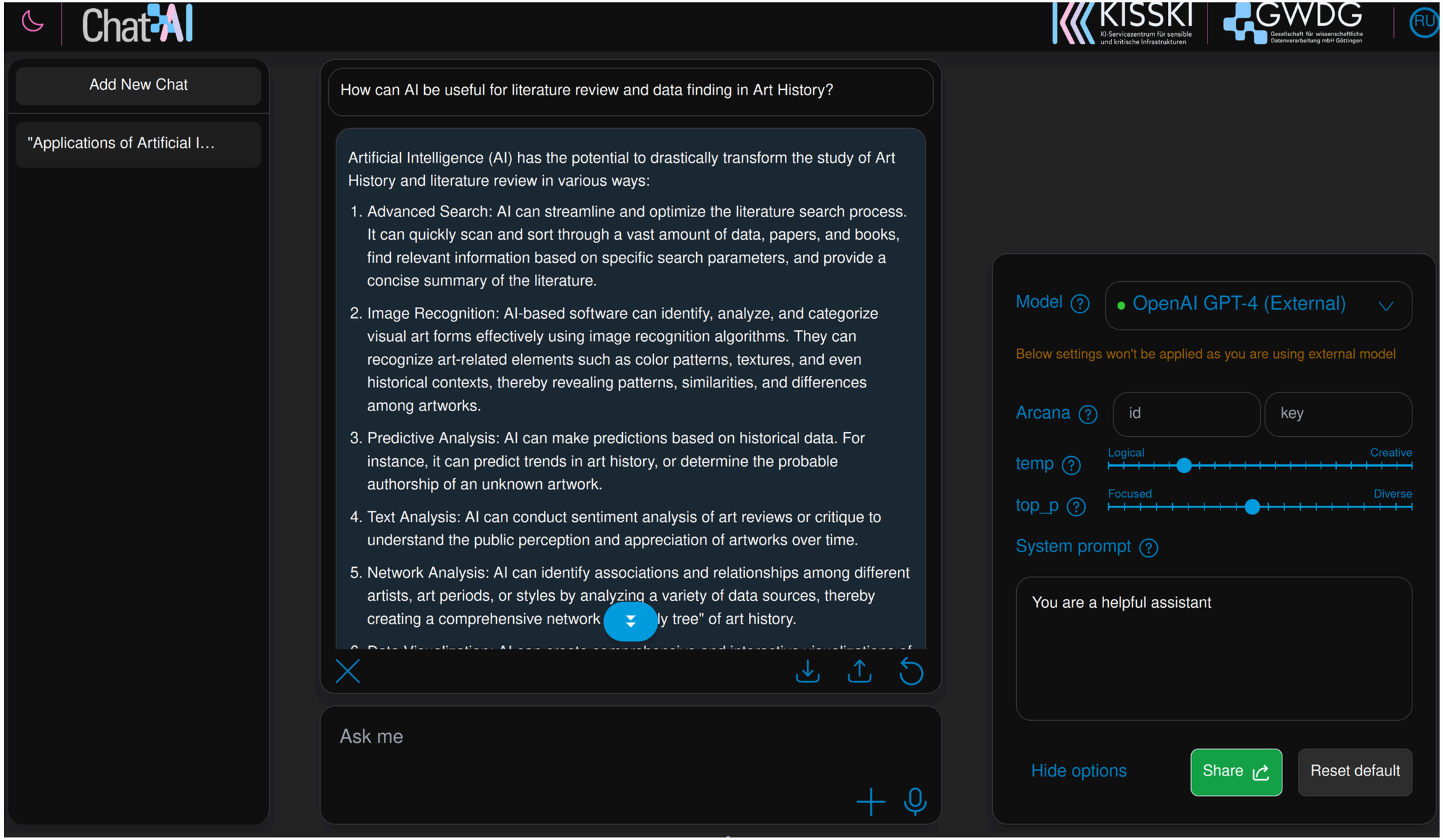
Kunsthistorisches Institut in Florenz

Digital Humanities Lab

Seminar: Research Tools and Open Science at the KHI

AI TOOLS


ACADEMIC CLOUD
type to filter your services...
Hello, Rafael Brundo Uriarte
DE
EN
AI chatbot
Chat AI offers an easy and secure access to powerful generative AI. The intuitive interface allows users to chat directly with a selection of different AI models via message, audio recording or text file. With various internal and external language models (LLMs), a variety of options are available to answer questions and receive support for study, research and teaching.
Flexible and secure interaction with AI
Chat AI offers a wide range of LLMs for study, research and teaching requirements. Internally hosted LLMs such as Intel Neural Chat 7B, Mixtral 8x7B Instruct, Qwen1.5 72B Chat or Meta LLaMA 3 70B Instruct as well as externally hosted LLMs such as OpenAI GPT-3.5-Turbo and GPT-4 are available for this purpose.
The LLMs differ in terms of response speed and quality and can be selected depending on the individual prioritization of these properties. In the advanced options, it is also possible to select for the internal LLMs whether the responses should be more logical or more creative. The behavior of the model can be controlled by formulating a system prompt that precedes each query.
Chat AI places particular emphasis on data security. When using the internal LLMs,
Chat AI
OPEN TOOL
AI
teaching
research


ChatAI
KISSKI
KI-Servicezentrum für sensible und kritische Infrastrukturen
GWDG
Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen
RU
Add New Chat
"Applications of Artificial I…
How can AI be useful for literature review and data finding in Art History?
Artificial Intelligence (AI) has the potential to drastically transform the study of Art History and literature review in various ways:
1. Advanced Search: AI can streamline and optimize the literature search process. It can quickly scan and sort through a vast amount of data, papers, and books, find relevant information based on specific search parameters, and provide a concise summary of the literature.
2. Image Recognition: AI-based software can identify, analyze, and categorize visual art forms effectively using image recognition algorithms. They can recognize art-related elements such as color patterns, textures, and even historical contexts, thereby revealing patterns, similarities, and differences among artworks.
3. Predictive Analysis: AI can make predictions based on historical data. For instance, it can predict trends in art history, or determine the probable authorship of an unknown artwork.
4. Text Analysis: AI can conduct sentiment analysis of art reviews or critique to understand the public perception and appreciation of artworks over time.
5. Network Analysis: AI can identify associations and relationships among different artists, art periods, or styles by analyzing a variety of data sources, thereby creating a comprehensive network
ly tree" of art history.
Ask me
Model
OpenAI GPT-4 (External)
Below settings won't be applied as you are using external model
Arcana
id
key
temp
Logical
Creative
top_p
Focused
Diverse
System prompt
You are a helpful assistant
Hide options
Share
Reset default

Summarization of Academic Papers	**Semantic Scholar**	Provides brief summaries (TLDRs) of main objectives and results of papers.	Free	Semantic Scholar Database
Chatbots	**Chat-AI on Academic Cloud**	Secure AI for study, research, and teaching. Supports multiple LLMs (e.g., Meta LLaMA 3, OpenAI GPT-4). Local and external.	Free for MPG	Internal and external LLMs
	AI2 Openscholar	Ai2 OpenScholar: Scientific literature synthesis with retrieval-augmented language models	Free	OPEN
AI-Powered Information Extraction	Consensus	Academic search engine using LLMs for topic- and paper-level insights. 20 searches/month free.	Freemium	Semantic Scholar Database
	ChatPDF	Analyze PDF content, ask questions, and request summaries. Limited to 2 documents/day.	Freemium	Internal model
	Elicit	Extracts, synthesizes, and finds papers relevant to research questions.	Freemium	Semantic Scholar Database
	Perplexity AI	Natural language search with citation tracking and real-time retrieval.	Freemium	Internal search index
Citation-Based Mapping	**Research Rabbit**	Visualizes relationships between research works.	Free	Multiple databases (unspecified)
	Connected Papers	Provides visual overviews of academic fields by mapping paper relationships.	Freemium	Semantic Scholar Database

ORGANIZING RESEARCH

- Academic Cloud
- RDMO
- Keeper
- Excel
- Omeka
- Tropy

ACADEMIC CLOUD

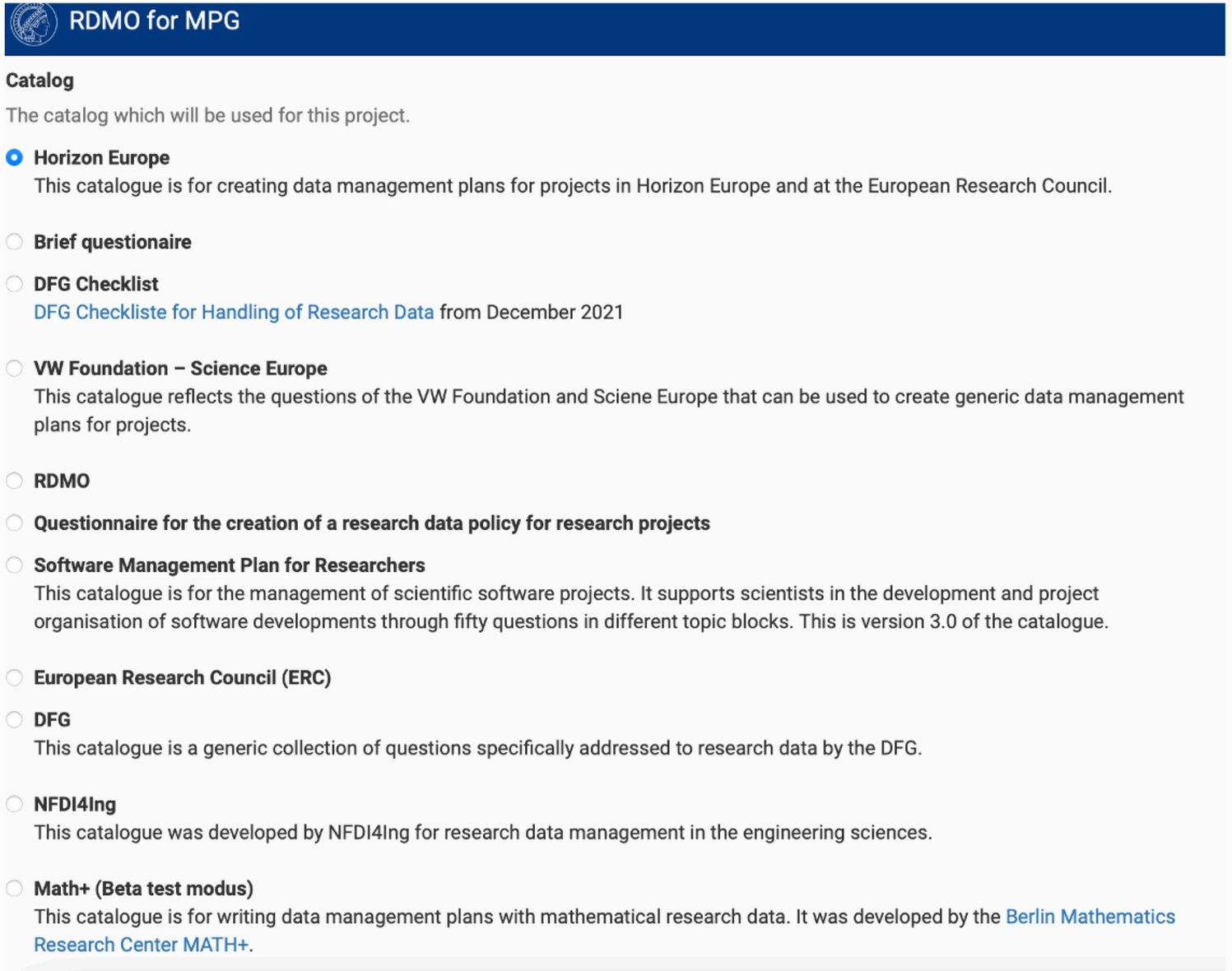
https://academiccloud.de/

The Academic Cloud is a cloud service tailored for academic study and research, offering secure, collaborative, and reliable tools. It enables users to share data with individuals, groups, or projects in a controlled environment. The service provides proven software applications accessible through a unified portal with a single account. Hosted in university data centers in Niedersachsen, it complies with stringent German data protection and security standards, ensuring safe and efficient data management.

RDMO

https://rdmo.mpdl.mpg.de

The "RDMO for MPG" service supports the organization and writing of data management plans for various funding organizations. Using the RDMO software, DMPs can be written more quickly and with other scientists. At the same time, the plans can be updated throughout the various project phases and possibly forwarded to funding bodies.



KEEPER

https://keeper.mpdl.mpg.de

·Keeper, based on Seafile software, is a long-term data archiving service for Max Planck employees and their external collaborators. It ensures access to archived datasets for at least ten years and provides features like metadata entry for generating a Cared Data Certificate and creating DOIs for datasets. Beyond archiving finalized data, Keeper supports syncing and sharing project files during active phases, automatically creates historical copies of local directories, and facilitates collaboration by allowing file sharing with individuals or groups. It helps organize and streamline data archiving throughout the project lifecycle.

EXCEL

Pros:

1) Familiarity

2) Powerful data manipulation

3) Visualization

4) Collaboration

5) Free or low-cost

Cons:

1) Limited data management - **have you tried OpenRefine?**

2) Version control issues

3) Limited reproducibility

OMEKA

https://omeka.org

Omeka is an open-source platform designed for managing digital collections and creating online exhibitions. It allows users to curate collections, publish metadata, and enhance functionality with plugins. It's particularly useful for museums, libraries, and scholars aiming to present research findings and collections through interactive websites, offering tools for public engagement.

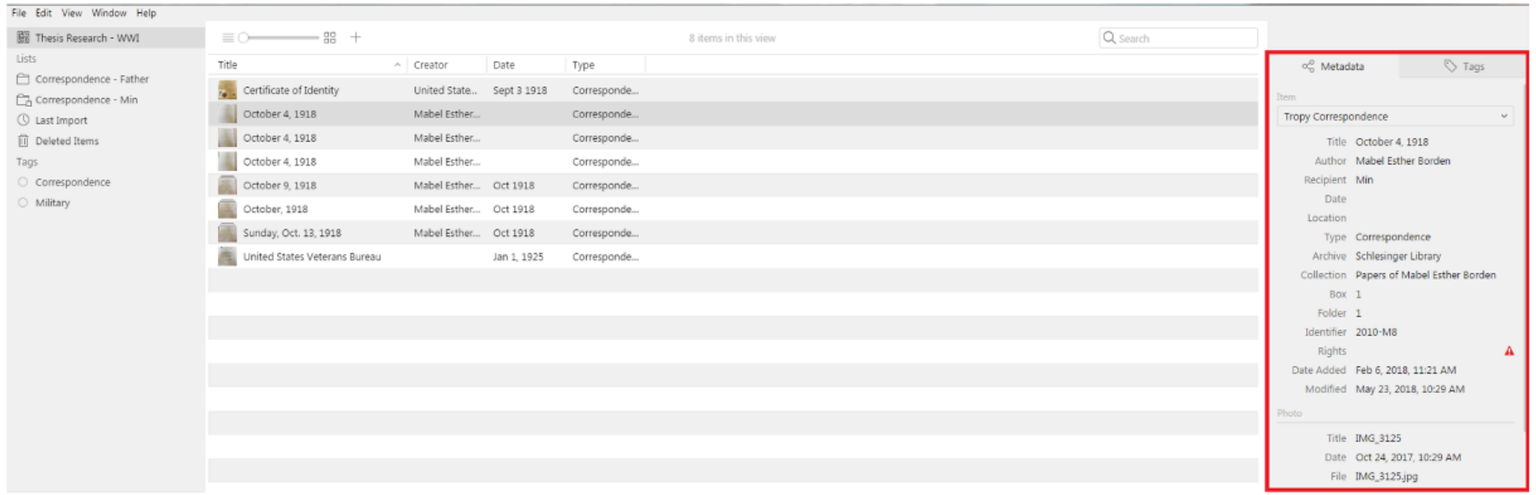
TROPY

https://tropy.org

Tropy is a free and open source tool designed for organizing and describing digital photos and archival research materials. It allows researchers to tag, annotate, and manage images, making it particularly useful for those dealing with digitized historical documents or visual research data in fields like history and anthropology.

Metadata

Metadata describing each photo or Item can be added to each individual photo or Item in the metadata pane on the right hand side of Project View.



PUBLISHING DATA

- Edmond
- Zenodo
- Figshare
- Re3data

EDMOND

https://edmong.mpg.de

·Edmond is the Open Research Data Repository free of charge to all members of the Max Planck Society. It serves the publication of research data from all disciplines and offers scientists the ability to create citable research objects. It enables secure preservation: provision, describing, documentation, linking, publishing and archiving of all kinds of data. Edmond supports standardized metadata profiles, and finally allows to gain an insight into the work of scientists at the Max Planck Institutes.

ZENODO

https://zenodo.org

Zenodo is a general-purpose open repository that allows researchers to deposit research papers, data sets, research software, reports, and any other research related digital artefacts.

FIGSHARE

https://figshare.com

Figshare is a provider of open research repository infrastructure that helps organizations and researchers to share, showcase and manage their research outputs in a discoverable, citable, reportable and transparent way.

RE3DATA

https://www.re3data.org/

·Re3data is a global registry of research data repositories that covers research data repositories from different academic disciplines. It includes repositories that enable permanent storage of and access to data sets to researchers, funding bodies, publishers, and scholarly institutions. re3data promotes a culture of sharing, increased access and better visibility of research data. The registry has gone live in autumn 2012 and has been funded by the German Research Foundation (DFG).

THANK YOU

LINKS

- https://academiccloud.de/
- https://rdmo.mpdl.mpg.de
- https://keeper.mpdl.mpg.de
- https://omeka.org
- https://map.florence4d.org/#/
- https://bibnum.explore.psl.eu/s/psl/page/accueil
- https://tropy.org
- https://edmong.mpg.de
- https://hsah.humanitiesconnect.pub/6/volume/2/issue/0
- https://edmond.mpg.de/dataset.xhtml?persistentId=doi:10.17617/3.IOLIEL&version=1.0
- https://doi.org/10.17617/3.8GPSDJ
- https://zenodo.org
- https://figshare.com
- https://www.re3data.org/
- https://www.re3data.org/repository/r3d100010364