

A scholar-driven AI notebook for assisted and transparent research

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Contribution Highlights

- **Artificial Intelligence (AI) is reshaping scholarly research workflows**, changing how knowledge is explored, discovered, and produced.
- **Prevailing AI tools rely on opaque chatbot-style interactions**, constraining transparency, reproducibility, and researcher control.
- **The OPERAS-led FASCA project introduces a scholar-driven AI notebook paradigm**, enabling assisted research with full visibility over analytical steps.
- **This approach aligns with FAIR principles**, for accountable, transparent, and extensible AI use in the Social Sciences and Humanities (SSH)

The GoTriple AI Notebook

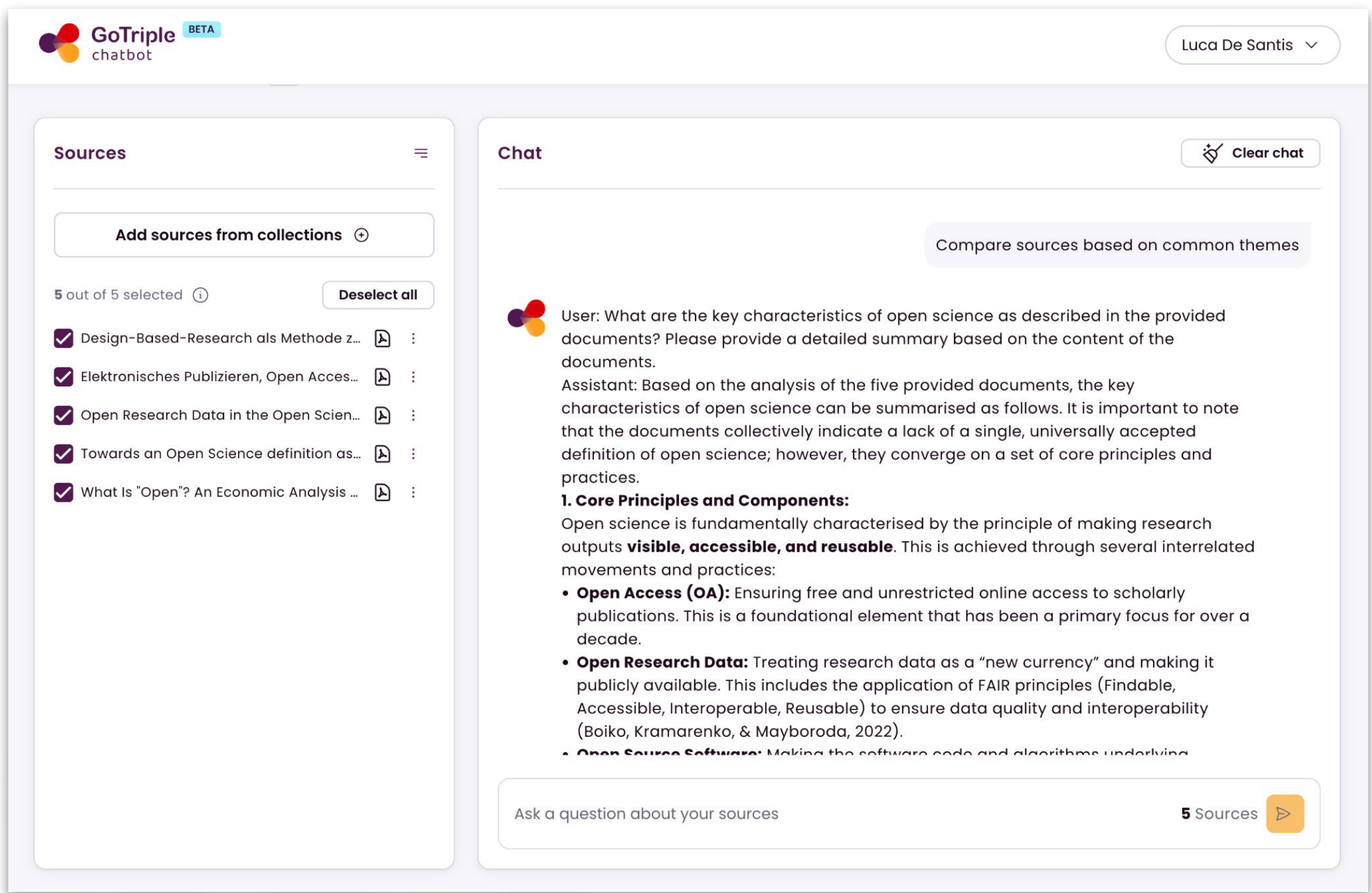
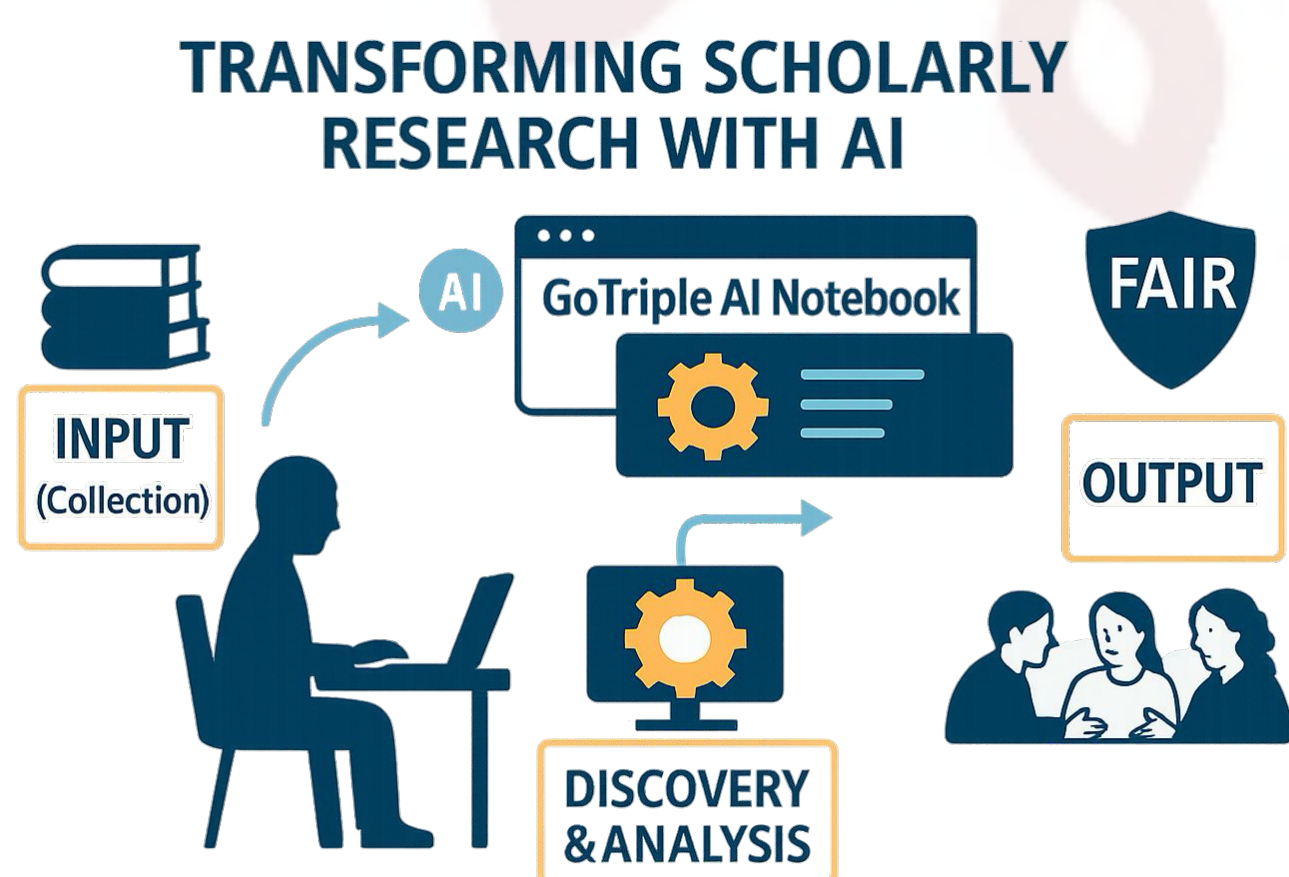
It is a solution implemented within **GoTriple** (<https://www.gotriple.eu/>), the SSH discovery platform indexing more than twenty million scholarly resources. The notebook provides:

1. a persistent & interactive environment in which researchers can analyse curated collections of documents through a conversational interface.
2. the opportunity for a multilingual interaction with the AI system and material
3. an underpinning DeepSeek-R1 instance, enabling advanced natural language processing capabilities.

Unlike traditional chatbots, the notebook maintains the full history of interactions, allowing users to iteratively refine their analysis while preserving context.

Research Scenario

A researcher can begin with a curated collection of publications and extract structured information to generate visualisations or datasets. The system allows the integration of external sources, such as statistical data or institutional repositories, enabling richer analytical contexts. Outputs can be exported in structured formats and shared through collaborative platforms, supporting reproducible and transparent research workflows.



Workflow for AI-Assisted Discovery

The workflow begins with the creation of a document collection selected from the GoTriple corpus. Researchers interact with the notebook through natural language queries, performing tasks such as summarisation, translation, or thematic exploration. This enables the extraction of structured knowledge, including entities and relationships, which can then be reused in downstream analytical processes. This makes the notebook an active research environment where exploration and discovery coexist within a single interface.

Extensibility through MCP

To extend the notebook, the system will integrate the Model Context Protocol, an open protocol that standardises interactions between AI models and external tools or data sources. This enables the notebook to connect with a growing ecosystem of scholarly oriented services, allowing researchers to retrieve external datasets, access additional repositories, or trigger computational workflows. MCP transforms the notebook into an extensible environment that can evolve alongside the EOSC ecosystem and the emerging needs of the SSH community.

Conclusion and Outlook

- ➔ **The GoTriple AI notebook introduces a new paradigm for AI-assisted discovery in SSH.**
- ➔ **Its integration within the White Label Platform enables adoption across scientific communities** (developed in the context of the Horizon LUMEN project)
- ➔ **The use of MCP ensures future extensibility.**

This work contributes to ongoing efforts within the OPERAS ecosystem to provide a transparent, interoperable, and sustainable use of AI in scholarly communication research.