Contribution ID: **24**   Type: **Poster**

Exploration of Scientific Collections with Multimodal Agentic RAG Systems

In this paper, we explore using multi-modal agents based on Large-Vision-Language-Models (LVLMs) what a scholarly collections portal can be beyond a digital showcase of the university's collections . We focus on the interactive exploration of scientific collections. Collection data is valued differently from different perspectives. For the university administrators, it is an item to be included in budgeting and space management. Public relations uses it to highlight the achievements of the institution, while scientists use it as research data and see the publication as an opportunity to connect with other researchers in their field.

Traditionally, university collection portals reflect administrative structures or collection contexts. This is a perfectly valid approach, but not always conclusive for outsiders, as seen in the access statistics. Our contribution focusses on the perspective of collection data as research data, which, serve a research community as well as the interested public. By using more explorative layers for data linkage and retrieval, we open up new entry points for the collection data and its underlying relations.

Search in conventional portals requires some expertise in field. Enhancing it with an interactive agent, which can answer questions about the portal in general or the objects within, opens up a object-centered and intuitive approach to the data for users of the collection portal. The text-to-image similarity search provides direct retrieval of images by their content in addition to the conventional method, where they are only search using their associated metadata.

In this contribution, we provide an overview of the components and interfaces and their integration into the microcosm of the collection portal. We also address the question of what is needed to transfer this functionality from the prototype to regular operation and whether or how these explorative methods can also be used to support the collection managers in their work.

I want to give a Lightning Talk

no

Authors: Dr VOGEL, Iris (UHH); SCHNEIDER, Florian (Universität Hamburg); BABA AHMADI, Narges (UHH); BABA AHMADI, Niloufar (UHH); BIEMANN, Chris (House of Computing & Data Science); Dr SEMMANN, Martin (House of Computing and Data Science, Universität Hamburg)

Presenter: Dr SEMMANN, Martin (House of Computing and Data Science, Universität Hamburg)

Session Classification: Poster Session