

## Short Report about the “atRium” Sommer-School

The recent atRium Training School workshop was an enriching and informative event focusing on the integration of R and SPARQL for managing spatial and semantic web data.

One of the highlights for me was the "Spatial Data in R" block, which provided insights into how to work with geospatial information using R. The workshop covered important tools and packages such as “sf” for vector data and “terra” for raster data, both of which are essential for anyone who wants to manage and analyse spatial data efficiently. The practical exercises and hands-on examples provided a solid foundation in handling and visualising spatial data, which will be beneficial for our ongoing research in geospatial analysis. In particular, the interactive maps using the “tmap” library will be a much used feature in the future.

In addition, the session on querying SPARQL in R was particularly enlightening. Understanding how to integrate SPARQL queries into R workflows was both interesting and practical. This part of the workshop presented ways of extracting Semantic Web data and incorporating it into R-based data analysis workflows, which opens up many possibilities for future research. The ability to query semantic web data directly in R is a powerful tool, especially for researchers working with linked open data or repositories. This newfound knowledge allows it to interact with vast amounts of structured data from different domains, integrating it more effectively into the research pipeline.

One of the key takeaways from the workshop was that it provided an excellent foundation for further use of R and SPARQL in research settings. The sessions were structured to ensure that participants gained practical skills, and I think it was achieved that everyone could feel equipped to apply these concepts to their own work. Whether it's analysing spatial datasets or querying semantic databases, the content of the workshop was comprehensive and well suited to our future needs.

I plan to share the knowledge and skills I gained during the workshop with my colleagues at the Institute. Many of them are already familiar with basic R programming, but the techniques learned in this workshop are highly relevant to the kind of interdisciplinary research we do. I see great potential for implementing the skills learned in the workshop in our future research. Combining spatial data management with semantic data querying allows for more sophisticated analysis of geographic and structured datasets, which is crucial for many projects. For example, our research could benefit from linking spatial data to knowledge graphs or using SPARQL to query data repositories. This workshop not only provided technical skills, but also encouraged creative thinking about how these tools can be applied in different research contexts.

Overall, the atRium Training School was a very well organised and enlightening experience. It left me with valuable skills and ideas that I am eager to apply and share, both within my institute and in future research endeavours.

Finally, I would like to thank all the organisers and speakers for their work and the Czech Academy of Sciences for hosting this great event. Thank you very much!

Brigit