Report on the summer school "Querying Data Aggregated in the ARIADNE Infrastructure and Their Spatial Analysis in R" which took place in Brno, from 16th to 20th September

by Dita Auziņa (post-doctoral researcher, Leiden University, Faculty of Archaeology)

Currently, the field of digital archaeology is experiencing two contrasting trends. On one hand, there is a growing digitalization of archaeological processes, including the documentation of excavations, digitization of materials, preparation of archaeological plans and maps, and data analysis. This trend also encompasses the increasing accessibility and mining of large archaeological datasets to support comparative analysis within expansive data infrastructures.

Conversely, while basic digital skills have become essential for the majority of archaeologists, a widening gap often exists between the skill levels of advanced computer archaeologists and the average digital user. This gap can hinder effective communication and collaboration between these two groups. To address this challenge, the training school titled "Querying Data Aggregated in the ARIADNE Infrastructure and Their Spatial Analysis in R," organized by the Institute of Archaeology, Czech Academy of Sciences in Brno, offers a promising solution.

This five-day training program in computational archaeology equipped participants with vital coding skills in the R programming language, knowledge of archaeological data integrated into the ARIADNE research infrastructure, and foundational expertise in spatial data analysis. The event attracted twenty specialists from various European archaeological institutions.

The first day focused on introducing participants to basic coding skills in R, progressing to foundational data analysis and visualization techniques. This presented a unique challenge for the instructors, who skillfully navigated the diverse skill levels of participants, ranging from complete beginners to those with years of experience in R programming.

On the second day, participants learned about the ARIADNE database structure and the AO-CAT Ontology it employs, enabling them to explore the rich array of data stored within the ARIADNE database. Although I initially felt my digital skills were not sufficiently advanced to fully utilize the introduced tools, the extensive knowledge I gained during this training significantly enhanced my understanding of data management processes.

The third and fourth days were dedicated to spatial data analysis. As a GIS specialist, I found these sessions particularly relevant and beneficial, as I acquired essential skills to transition my GIS projects to the R infrastructure.

Finally, on the fifth day, participants were given the incredible opportunity to work with our own data in R, receiving support and guidance from the instructors throughout the process.

As a result of this training school, I have gained the skills necessary to transfer my environmental modeling projects to R, along with an understanding of the vast possibilities available when adapting code to meet specific data and analysis needs. While it is challenging to transition from a complete beginner to a proficient coder in just one week, this training school has effectively bridged the gap between advanced digital archaeologists and those who engage with digital data for their project requirements.