# Conclusion

This work has explored the specificities of data visualization in healthcare research, with a particular focus on big datasets and described the development of a data visualization automation tool.

The original contribution of this work lies in the development of a specialized data visualization system designed to meet the specific needs of academic and healthcare settings. While it currently operates in a local environment, it offers a modular architecture that is ripe for future expansion and integration into cloud-based platforms.

The system demonstrated its ability to efficiently create and update complex visualizations, such as Forest Plots, offering substantial advantages in terms of time and resource efficiency.

Importantly, the development process served as an applied case study in employing a range of software development methodologies and best practices, offering significant learning experiences that can inform future work in this domain.

Several limitations were identified, setting the stage for future development that could focus on expanding the types of visualizations supported, increasing scalability, and offering more versatile deployment options.

Ultimately, the insights gained through this work affirm the power of data visualization as a critical tool for data interpretation and decision-making in healthcare research. As this field continues to evolve, it is anticipated that the integration of specialized tools, coupled with advancements in software engineering practices, will further amplify the capabilities of data visualization to serve the complex needs of healthcare research and beyond.

As a final note, it is worth mentioning that the tool developed through this work will be actively leveraged in our scientific communication processes, particularly in the context of real-world evidence. This incorporation not only adds a practical dimension to the academic contributions of this research but also paves the way for a sustained impact on healthcare research and outcomes.