

# Data Visualisation & Open Source Technology



## Working Group Scope

Data Visualisation and Open Source Technology aims to support, address, and answer pertinent questions around Data Visualisation and Open Source Technology. The combination of these two subjects is natural in today's environment given the powerful Data Visualisation tools within the Open Source languages available today. Some of the questions, amongst others, that we intend to address are:

- How do you safely use Open Source languages for analytics and submissions within a Regulatory environment?
- What are the potential uses of Open Source software within a company outside of data analysis for a submission?
- How can interactive visualisations be leveraged appropriately within a clinical environment?
- What are the best practices for creating powerful interactive visualisations?

## Current Projects

[Best Practices for Interactive Analysis for Decision Making Submissions](#)

[Clinical Statistical Reporting in a Multilingual World](#)

[Julia Initiative for High Performance Computing](#)

[R Environment System Qualification](#)

[R Shiny Interactive Forest Plot](#)

[Test Dataset Factory](#)

[End-to-End Open Source Collaboration Guidance](#)

**Hanming Tu:** Working Group Lead



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Hanming Tu currently works as VP of Clinical IT and Database Administration (DBA) at Frontage Laboratories before working as Clinical IT Director at Octagon Research, manager in Accenture Life Science Cloud (ALSC), the technical lead at Accelerated R&D Services (ARDS) at Accenture prior joining Frontage. He has over 10 years of pharmaceutical experience and 15+ years of IT experience in DBA, UNIX, clinical systems, and clinical data management. He obtained Oracle Certified Professional (OCP) and a Master in DBA track from Oracle University. He actively participates in standard teams in CDISC and in working groups in PHUSE. He presented numerous times on emerging technologies, data standardization, data visualization, data transformation and automation intelligence to industry conferences such as DIA, CDISC, PhUSE, PharmaSUG, etc. He has been actively engaging in open source technologies and published numerous R and R shiny packages in Comprehensive R Archive Network (CRAN). He has a Master in City and Regional Planning from Ohio State University and a Master in Physical Geography from Central China Normal University.

**Mike Stackhouse:** Working Group Lead



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Michael Stackhouse is the Chief Innovation Officer at Atorus Research. He has extensive CDISC experience, working with both Study Data Tabulation Model (SDTM) and Analysis Data Model (ADaM) standards, and serving as a subject matter expert for Define.xml. He holds a bachelor's degree from Arcadia University, where he studied business administration, economics, and statistics. He is a 2020 UC Berkeley School of Information Master of Information and Data Science (MIDS) program graduate, where he worked on projects involving computer vision, natural language processing, cluster computing, and deep learning. His special interests include automation, machine learning, big data technology, and mentoring rising programmers.

Previously, Michael was a senior manager of statistical programming at Covance, where he led U.S. innovation activities for the FSP department. Under his guidance, projects achieved data standardization according to SDTM standards on upwards of 75 studies, including database integration and data warehousing. He also managed programming activities through a multiagency submission for multiple studies across a single compound. In addition, he took on multiple automation projects, including the development of a tool capable of dynamically locating programming independence violations and automatically detecting protocol deviations, as well as the creation of data pipelines around tracking systems for programming deliverables. Michael and his team at Atorus have been actively developing and releasing open source R packages, such as pharmaRTF and Tplyr.