**Modernizing the Clinical Trial Analysis Pipeline with R and JavaScript**

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Clinical trial research is highly regulated and notoriously slow moving. As a result, modern data analysis tools and techniques that have become commonplace in other industries have struggled to achieve broad or consistent adoption. This presentation introduces three R packages that allow clinical trial researchers to interact with their data using tools that are free, reproducible, customizable, and easy to use. The packages combine JavaScript-based interactive graphics with a flexible R data pipeline built for existing clinical data standards. This flexible technical framework, combined with an open source development workflow in GitHub, may provide a useful road map for creating similar tools in other change-resistant environments.

**Bio:** I've worked in clinical trial research for 15 years, first as a biostatistician and more recently leading cross-functional data science teams focused on creating open source tools that modernize the clinical trial analysis pipeline. Part of this work is being done in the context of the ASA/DIA sponsored Interactive Safety Graphics working group which combines stakeholders across the pharmaceutical industry including the FDA. I've spoken about these topics and demonstrated tools at clinical trial conferences, and I think the RStudio Conference would be a great venue to continue the discussion.