

# Teaching data analysis in R through the lens of reproducibility

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The issue of reproducibility often comes up in the context of published research and the need to accompany such research with the complete data and analyses, including software/code. As statistics educators who teach data analysis, we should be instilling best practices in students before they set out to do research. We advocate for teaching data analysis and programming in *R* using **R Markdown**, even to students who have no previous programming experience. In this talk we will discuss benefits of this approach, not only with respect to creating opportunities for discussing the importance of reproducible research, but also for learning syntax, avoiding common novice pitfalls, and organizing and unifying output and write-ups. We will present examples from data analysis labs using this approach as well as experiential and statistical evidence that R Markdown can be used effectively in introductory statistics courses.