Designing Data Science Worshops for Data-Intensive Scientific Research

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Abstract

Over the last 20 years, statistics preparation has become vital for a broad range of scientific fields, and statistics coursework has been readily incorporated into undergraduate and graduate programs. However, a gap remains between the computational skills taught in statistics courses and those required for the use of statistics in scientific research. In this talk, I will describe research on the design, implementation, and evaluation of a suite of data science workshops for environmental science graduate students, providing students with the skills necessary to retrieve, view, wrangle, visualize, and analyze their data using reproducible tools. These workshops fill a critical hole in the environmental science and statistics curricula, supporting students with opportunities to grow in their skills for computing with data. Open to faculty, staff, and the larger community, these workshops promote continued learning of the tools necessary for working with data and provide additional resources for incorporating data science into the classroom.