When faced with data from various sources, of various types, what do the data tell us, what questions can be asked, and what clues can we find in the data to further our understanding? Unlike traditional "confirmatory" statistics that emphasizes parameter estimation from parametric models and hypothesis tests on their significance, exploratory data analysis takes a different approach to analyzing data, one that avoids any pre-conceived model that the data must fit and allows the data to suggest the model. EDA tools reveal patterns in the data given the inevitability of violation of traditional assumptions (e.g., no outliers or missing values, Gaussian distributions, independence, etc.). This session introduces some of these tools and illustrates their value, including displays for univariate data, displays for multivariate data, checking the shape of distributions, robust-resistant two-way analyses, fitting skewed/heavy-tailed distributions, and assessing uncertainty. The tools will be illustrated using real data from various fields.

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