

Podcast: *ACM Bytecast*
Episode 11: Jeffrey Heer

In this episode of *ACM Bytecast*, the host is joined by Jeffrey Heer, a master of transforming spreadsheets of data into works of art. Jeffrey is a professor of Computer Science and Engineering at the University of Washington, and also holds the title of Chief Officer at [Trifacta](#), a company he co-founded. The podcast begins with Jeffrey introducing himself and sharing how his interest in helping people make sense of data and data analysis was born. His passion is found in building systems, such as visualization tools, to help people understand and work with data. He works on many visualization projects and loves the interdisciplinary field in can be applied to.

Next, the host asks Jeffrey about the demand for visualization. Jeffrey explains how visualization has a long history, however it has recently had much more general interest. There are many reasons for this, such as the larger and more diverse sets of data collected and challenges in understanding and analyzing data. Data visualization helps people use an overall vision to understand patterns and trends in data and to further investigate specific questions. Jeffrey also explains some of the challenges faced in data investigation and how visualization helps increase critical thinking and a deeper understanding of the data being analyzed.

The host then moves on to ask Jeffrey about tools being created to help avoid pitfalls in data analysis. Jeffrey begins by addressing different tools that been made to create an effective visualization design that helps guide people through the data to making informed thoughts and choices. He also covers the pitfall of biases and shares some safeguards that are being used to help avoid this. One way this is done is through using visualization to show the actual interpretation of data and internal representations. He also touches on the topic of reverse engineering, which takes the form of beginning with the visualization process and then moving to engineering. Visualization is an essential tool to use throughout the whole design process of creating quality machine learning and reducing biases.

Moving from the data tools to Interactive data analysis, the host asks Jeffrey to share about his own experience in this field. He begins by explaining the importance of data wrangling, which means taking data and making it clean, formatting it, and preparing it for analysis. Going along with this, Jeffrey shares about a tool he helped created for the process of interactive data analysis called [Boba](#). This goal of this tool is to show all analysis decisions which then gives the ability to evaluate each outcome and analyze them all in parallel. This then allows inference-based decisions to be made by looking at a variety of outcomes.

Lastly, Jeffrey shares some advice he has learned form his many years of experience. He encourages others to take the time to research, collaborate with others, learn from other researchers, and to broaden their understanding of the field through classes, tools, and a variety of curriculum. He shares his excitement for the future of data visualization and the progress that is already being made in this field.

Links:

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