

VisChatter: Enhance Synchronous Collaboration on Data Visualization Dashboard with Visual Annotations

Songwen Hu

Georgia Institute of Technology, Atlanta, Georgia, United States

Tong Yu

Adobe Research, San Jose, California, United States

Sungchul Kim

Adobe Research, San Jose, California, United States

Ryan Rossi

Adobe Research, San Jose, California, United States

Cindy Xiong Bearfield

Georgia Tech, Atlanta, Georgia, United States

Abstract

Online meetings around data have become integral to insight generation and collaborative decision-making. However, effectively communicating data in these settings presents significant challenges. Visualizations often include multiple patterns to perceive, and verbal descriptions of these patterns can be ambiguous, leading to potential miscommunication. Visual annotations offer a means to clarify these ambiguities and enhance user engagement with the data. Yet, existing online meeting tools often render the creation and management of these annotations cumbersome, detracting from the spontaneity of discussions. To address these challenges, we introduce VisChatter, a tool that facilitates real-time visualization annotation through a multi-modal agent. This agent integrates user speech and mouse movements to generate chart annotations, informed by a formative study that evaluated the efficacy of various annotation techniques. Our evaluation suggests that VisChatter significantly reduces cognitive and physical load during online data pattern communication while maintaining a user experience comparable to established platforms like Zoom.