Design visualization for the data science workflow

Recently, a large amount of complex and heterogeneous data is being generated in almost every domain. However, deeply understanding such data remains a fundamental challenge. Where do we start? Which analytical model should we apply, and how does it work? How can we collaboratively analyze data? My research takes a step to address these questions using interactive visualization. In this talk, I will discuss how visualization can empower users in each of the three main stages of solving a practical data problem, including exploratory analysis, model curation, and insight communication. Each example project I am going to show is situated in a real-world application such as social media mining. I will also outline a few interesting future directions of optimizing the above workflow using interactive visualization.

Dr. Jian Zhao is a Research Scientist at FX Palo Alto Laboratory (FXPAL). His research lies in the intersection of information visualization, human-computer interaction, and data science. He is dedicated to developing interactive visualizations that optimize the analytical workflow of solving complex real-world data problems. He received his Ph.D. from the Department of Computer Science at the University of Toronto. Dr. Zhao is the recipient of several scholarships, such as an NSERC Postdoctoral Fellowship, a Mitacs Award, and four paper awards at top-tier venues including IEEE VIS and ACM CHI. He has served on the program committees of many world-class conferences (e.g., IEEE VIS, ACM CHI, and Graph Drawing). In addition, he has the experiences of working at other leading industry labs including Microsoft, IBM, and Adobe Research. He holds more than a dozen patents and some have successfully generated impact on products. More information can be found on his personal website: https://jeffjianzhao.bitbucket.io/