

Interactive Visualization Techniques for Urban Data Analysis

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Abstract

The explosion in the volume of data about urban environments has opened up opportunities to better inform both policy and administration, and thereby to help governments to overcome constant challenges of improving/increasing the quality of public services and promoting sustainable development. By taking advantage of the modern computer graphics and the power of the human visual system, interactive visualization techniques have been shown to be powerful tools that help making sense of large collections of data. In this talk, I will describe recent data visualization techniques designed to allow analysts to interactively explore and analyze large collections of urban data. These techniques include visual and algorithmic aspects and have been applied to help domain experts in the fields of urban planning, transportation engineering, and architecture.

Biography

Nivan Ferreira is a Postdoctoral Scholar in the Computer Science Department at the University of Arizona. He received his Ph.D. in computer science from the Polytechnic School of Engineering of New York University in 2015. His main research interests are in the large area of data visualization focusing on the design of interactive visual analysis techniques for exploration of large datasets and the use of pattern mining techniques in visualization. He is the recipient of 2013 Deborah Rosenthal, MD Award for outstanding performance on the PhD qualifying examination and of the 2015 Pearl Brownstein Doctoral Research Award, given to PhD students in the Department of Computer Science and Engineering whose doctoral research shows the greatest promise. His paper on trajectory clustering was awarded an Honorable Mention at EuroVis 2013.