

Abstract

In this paper it was investigated how point and line graphs can be improved by interaction, so that the user can deal more efficiently with the presented data and the analysis and the understanding of the data is simplified.

A web application for the display of 2- and 3-dimensional data sets was developed. The technology of a web application has been presented (JavaScript, HTML, CSS, SVG), the application design (UI, configuration, filtering, mapping, rendering) and problems which occurred during the development have been documented.

In this work the concepts of data visualization (Visualization Pipeline) and the design of user interfaces (Information-Seeking Mantra) were explained. The developed interactive chart implements interaction methods which are common (such as Zoom, Filter, Details-on-demand) or rarely used in practice (reduction of three- to two-dimensional scatter plots by projection).

The full version of the paper (german) can be accessed at

<https://mmathys.github.io/maturapaper.pdf>