

Exercise 4.2 – Glyph Placement Strategies

1)

Data points are N-dimensional vectors which can be translated into a glyph. The placement strategy for placing multiple glyphs in the available space can be data-driven or structure-driven. Data-driven: The data are used to compute or specify the placement of a glyph (a data point). For example, for the placement of glyphs in a 2-dimensional space, two arbitrary dimensions of a data point determine the placement of its glyph.

Structure-driven: Explicit or implicit relations between data points, which may or may not be derivable from data values, determine the location of the glyphs. The paper categorizes these relations into ordered, hierarchical, or generalized network/graph structures.

2)

If the placement strategy allows for glyph overlapping, there are no algorithms needed which distort the placement of glyphs and therefore alter the accuracy of the visual depiction. On the other hand, overlapping glyphs can be difficult for the user to interpret because of occlusion effects.

3)

The main reason for the application of distortion techniques is to reduce clutter and overlap in order to improve the clarity of the visual depiction. There is a trade-off between accuracy and clarity.