ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Visualization 2

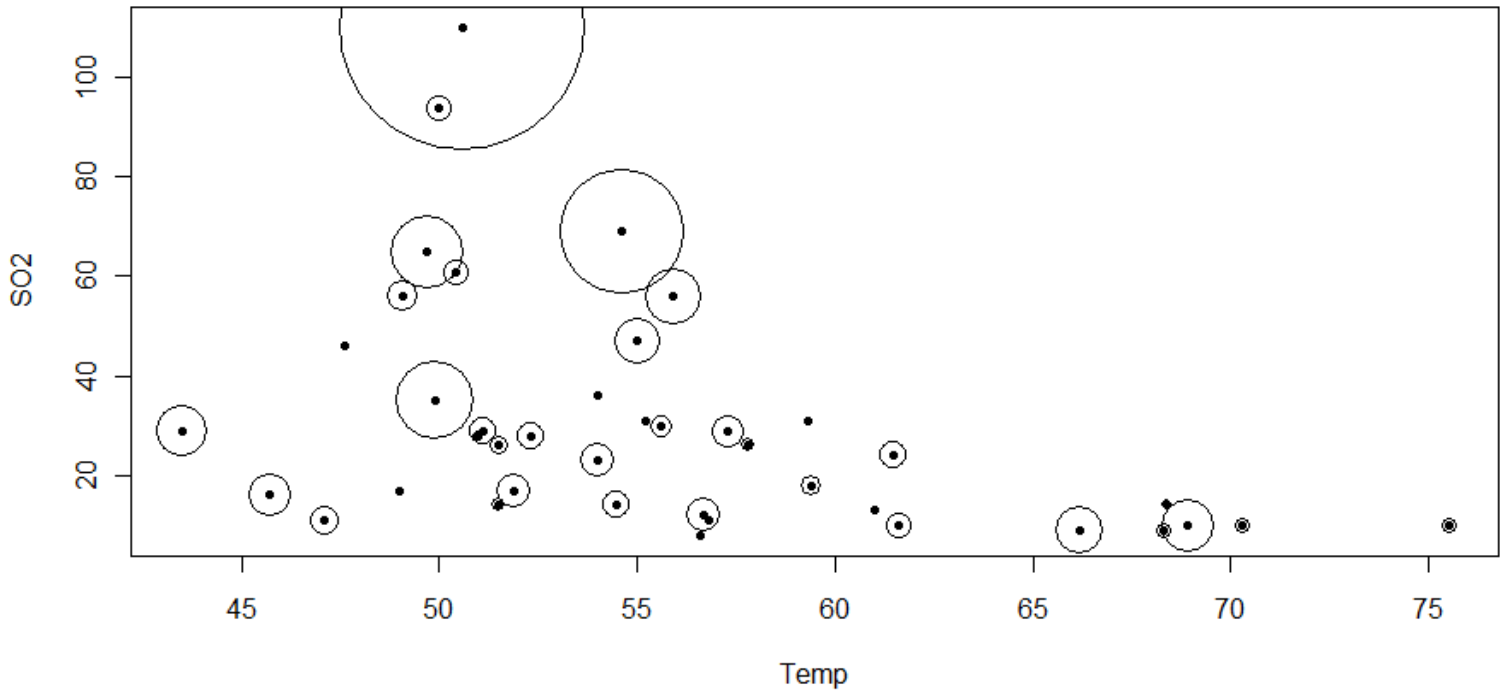
Applied Multivariate Statistics – Spring 2012

Goals

- Bubbleplots
- Parallel Coordinate Plots
- Glyphplots (stars)
- Teaser: rggobi, googleVis (not for exam)

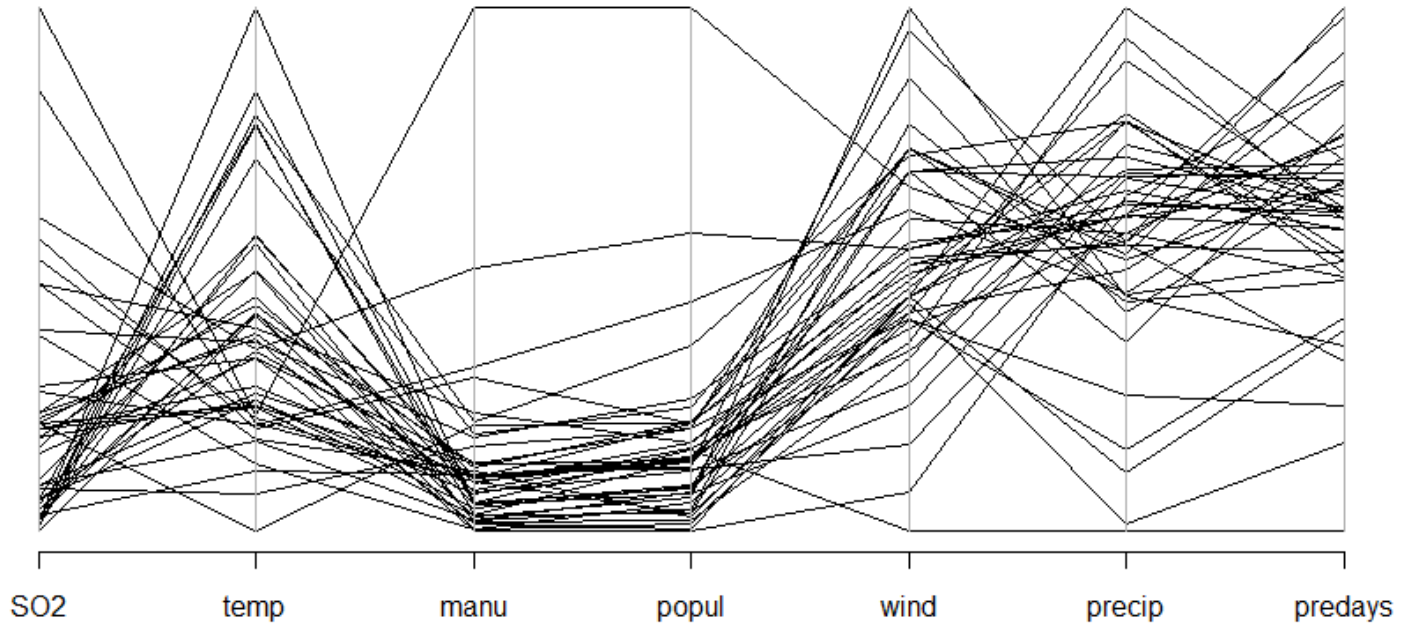
Bubbleplot

- Standard scatter plot, but the plotting symbols vary according to third variable



Parallel Coordinate Plots

- Easily overcrowded

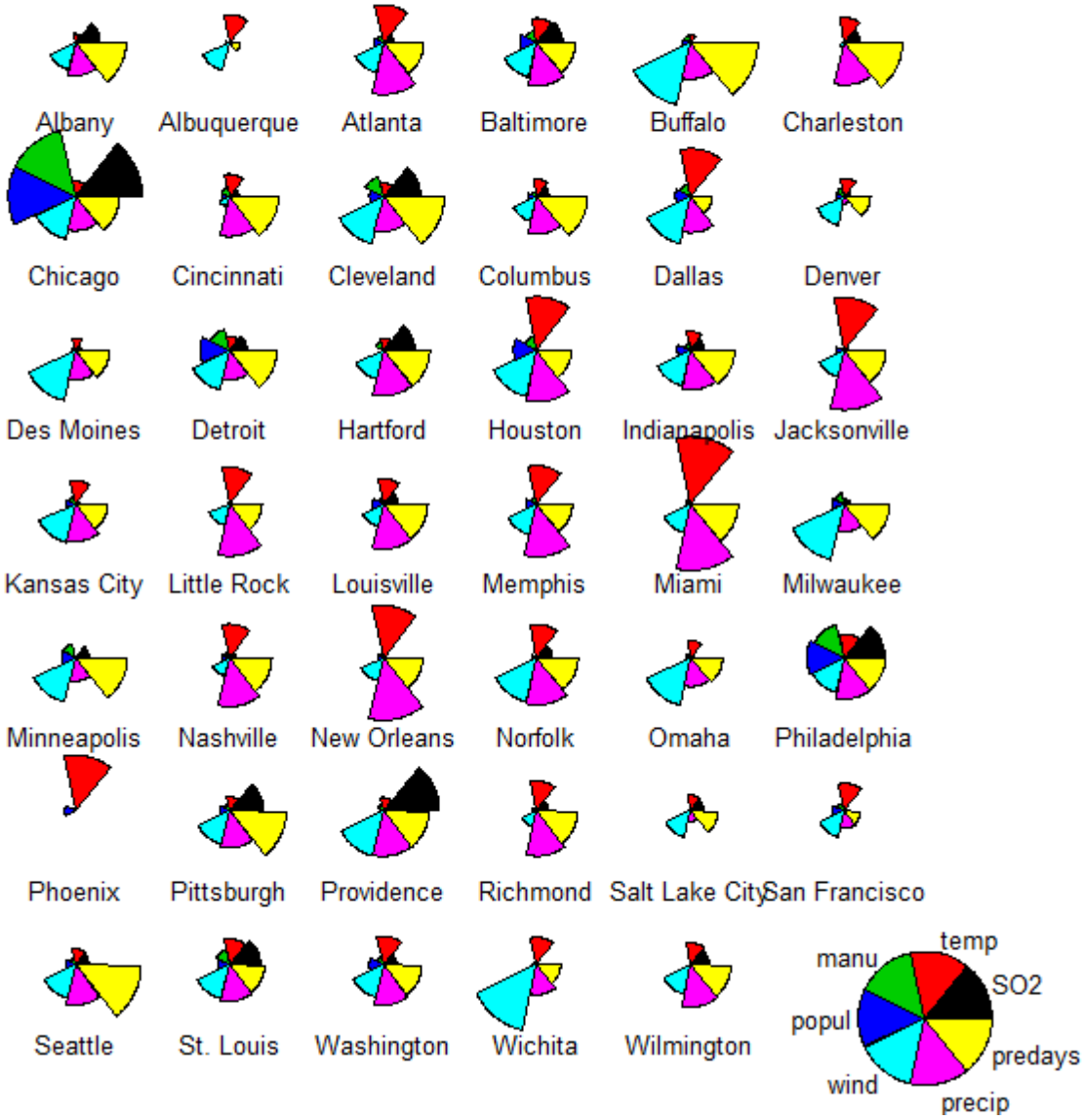


Glyphplots for continuous data

- Each data sample is represented by a symbol (=glyph) with some aspects
- Depending on data values, aspects are more or less pronounced
- Very good, if you have few samples (<50) and not too many variables (<10)

Glyphplots: Stars

- Which cities are special?
- Which cities are like New Orleans?
- Seattle and Miami are quite far apart; how do they compare?



If data is not continuous…

- Categorical: See next lecture
- Mixed: Very hard
  - parallel coordinate plots might work
  - use colors or plot symbols

Export graphics

- “Export” button in Rstudio
- Functions jpeg(), pdf(), etc. in R

R commands to know

- Symbols
- Parcoord
- Stars

Teaser: ggobi

- Nice tool for brushing (highlight a sample) and identification of a sample
- In theory: Can be linked to R via package rggobi
- In practice: Hard to set up properly

Teaser: R package “googleVis”

- Many useful visualization functions
- Output can be easily embedded in webpage

- Example: MotionChart
  Show development of data over time

Next week

- Visualizing categorical data and making inference
- Detecting outliers in many dimensions