

CS448B :: 21 Oct 2009

# Graph and Tree Layout



Jeffrey Heer Stanford University

## Topics

Graph and Tree Visualization

- Tree Layout
- Graph Layout

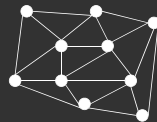
Goals

- Overview of layout approaches and their strengths and weaknesses
- Insight into implementation techniques

## Graphs and Trees

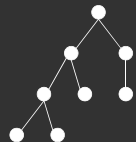
Graphs

- Model relations among data
- Nodes and edges



Trees

- Graphs with hierarchical structure
  - Connected graph with  $N-1$  edges
- Nodes as *parents* and *children*



## Spatial Layout

The primary concern of graph drawing is the spatial layout of nodes and edges

Often (but not always) the goal is to effectively depict the graph structure

- Connectivity, path-following
- Network distance
- Clustering
- Ordering (e.g., hierarchy level)