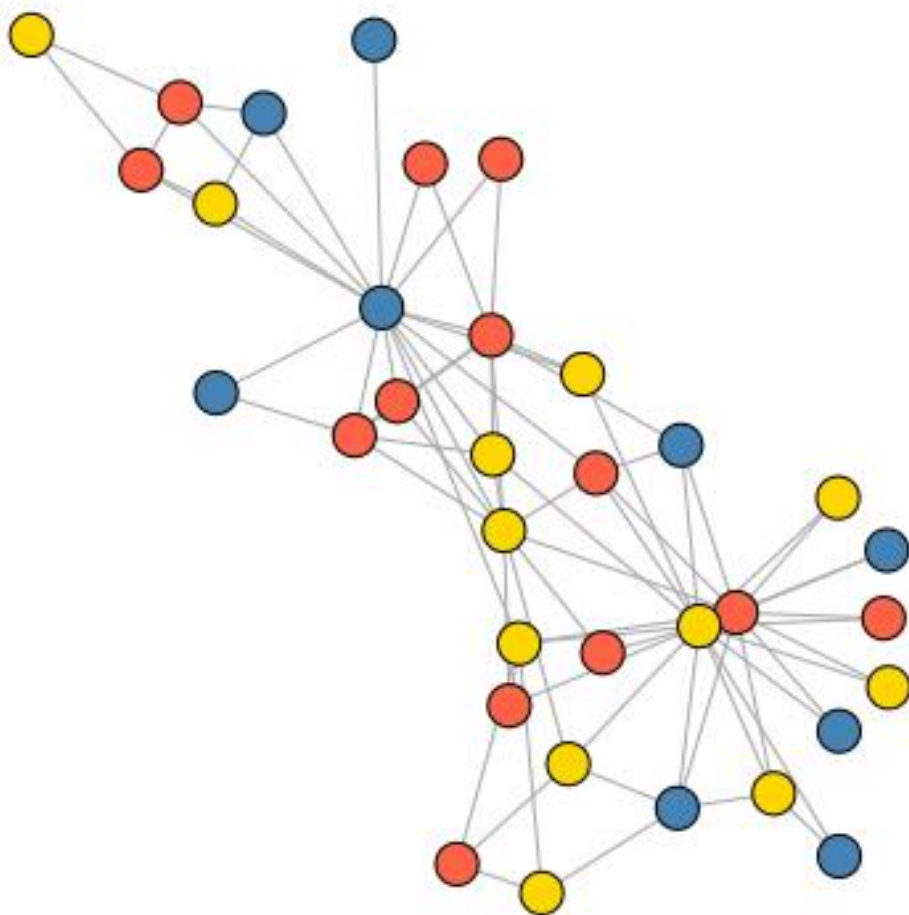# Analysis of Methods for Automatic Graph Clustering

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Introduction

- Many systems can be modeled as networks consisting of nodes and edges

- Creating such a graph by hand requires a large time investment

- Emphasis on automating the graph creation process

CLARINET

- Automatically extracts information from literature and creates graph to model intracellular signaling

- Uses output of automatic machine reading tool to formulate possible candidates for graph

CLARINET (cont.)

- Two scores assigned to nodes: individual assessment and pair assessment
  - Calculated using a frequency class metric (how often the event appears throughout the literature)

- Clusters nodes based on these metrics, then adds to model
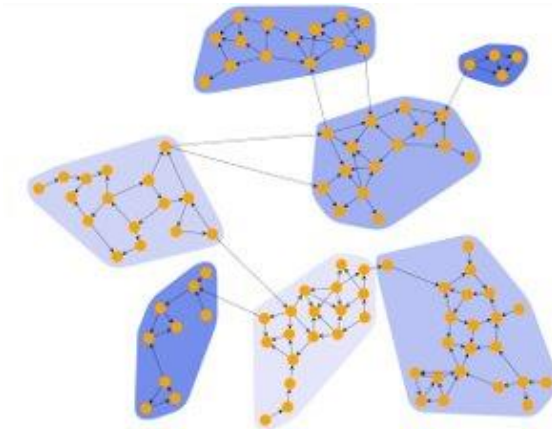
Project Outline

- Examine the ways in which graphs can be automatically clustered

- Dive deeper into the methods used in the CLARINET tool and explore possible improvements

- Explore additional clustering methodologies used throughout literature

Image Citations

- https://stackoverflow.com/questions/58598186/counting-edges-in-a-graph-by-the-attribute-of-nodes-they-connect

- https://www.yworks.com/pages/clustering-graphs-and-networks