

MultiAggr: A Technique for Aggregating Multivariate Networks

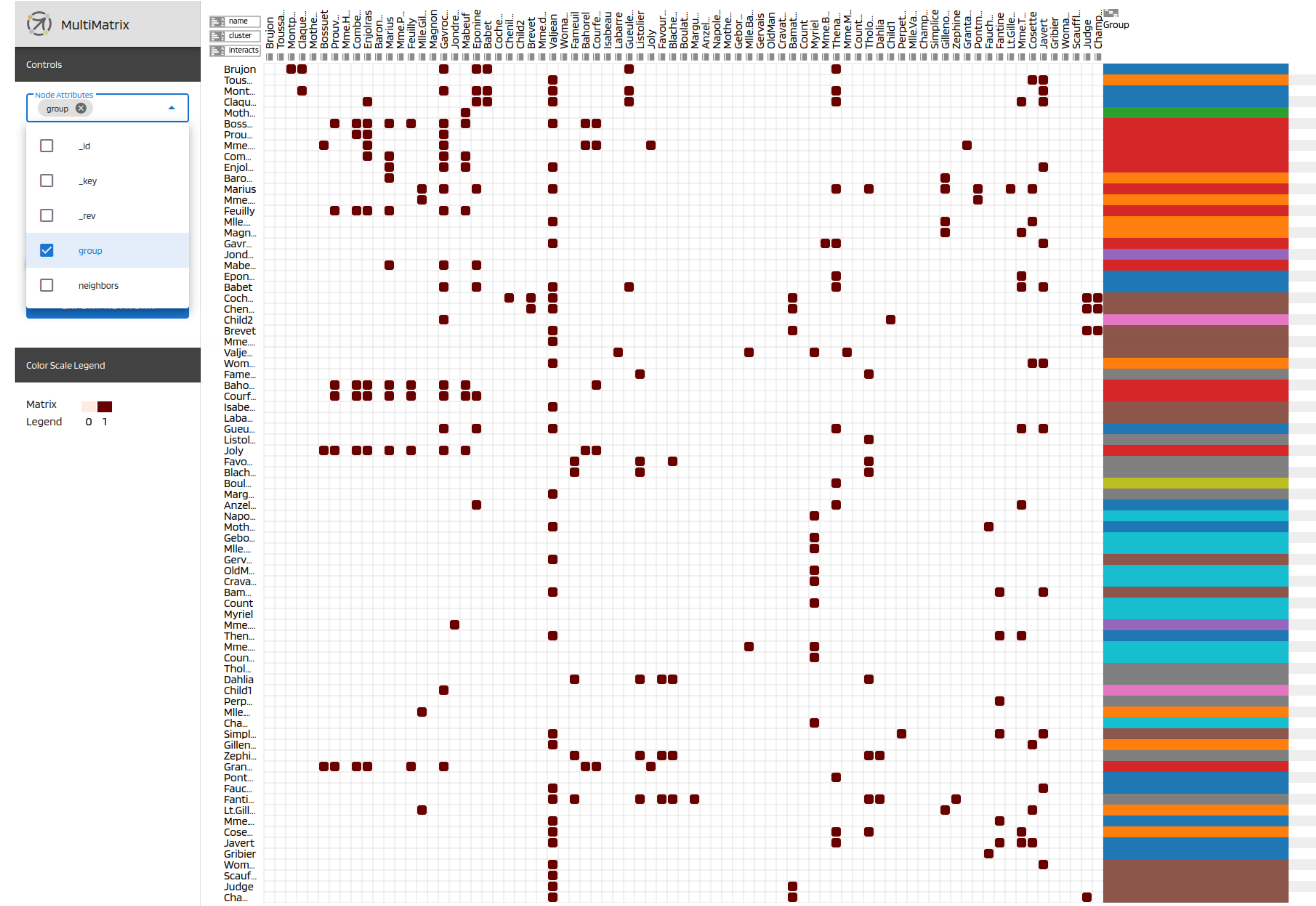
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The Problem

Aggregation is an important data wrangling operation for summarizing multivariate networks(MVNs). The challenge for visualizing an MVN is limited screen space to display information about the network and the data associated with the nodes and links, particularly for dense MVNs. To address this we introduce MultiAggr, a novel visualization technique for aggregating MVNs across a single axis using categorical node attributes and the Adjacency Matrix Layout of a network. MultiAggr focuses on providing a visual summary of aggregates and interaction for exploring the relationships between members in an aggregate and different aggregates.

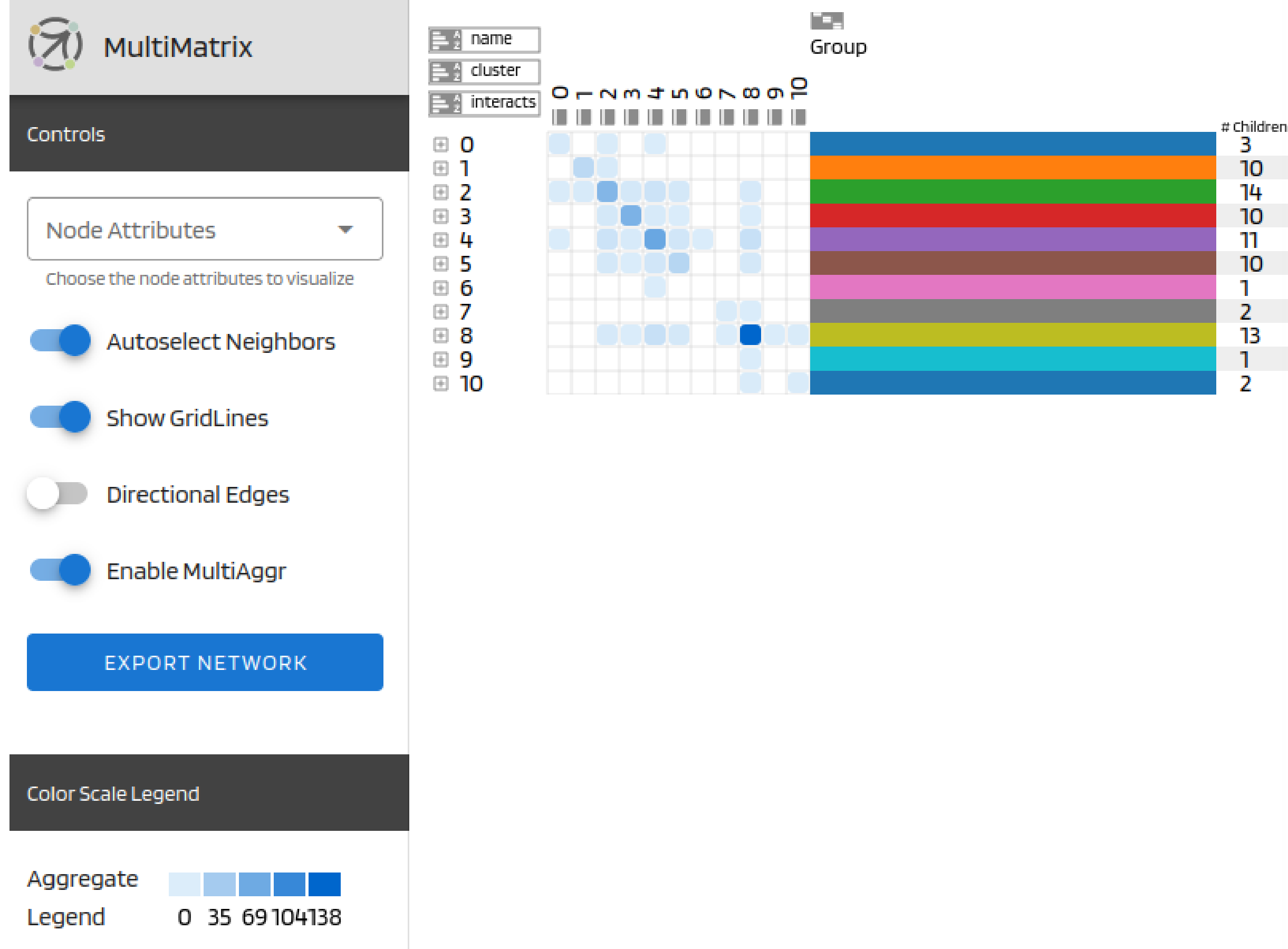
1. Aggregate by Categorical Node Attribute

Categorical attributes for aggregating the matrix are shown in a dropdown menu. The different aggregate groups are visually encoded with different colored rectangles next to the matrix.



2. AggrMatrix

AggrMatrix represents the result of performing aggregation for a single categorical node attribute. A count summary and legend indicate the number of elements in an aggregate group.



3. Exploring Relationships Between Nodes

Aggregate groups can be expanded to explore relationships between other aggregate groups and children nodes in an aggregated group.

