A Web Framework for Explainable and Malleable Visualisation

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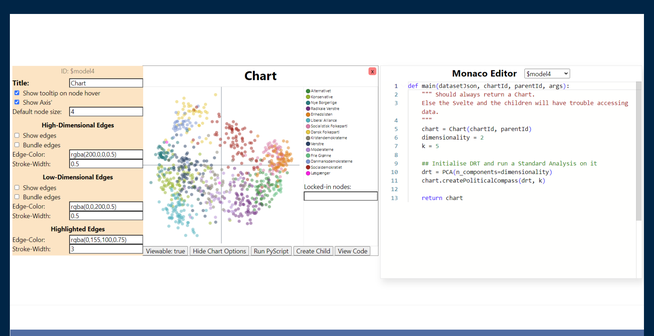
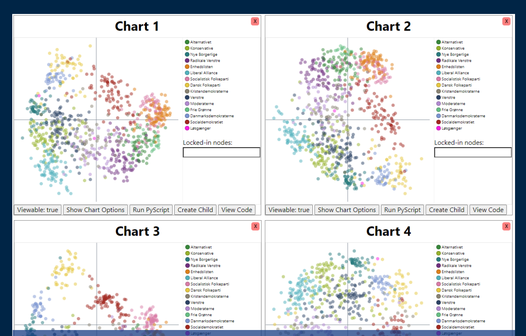
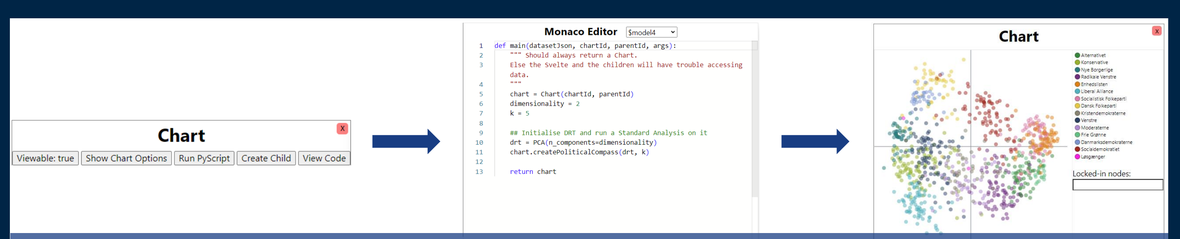
Explainability & Malleability



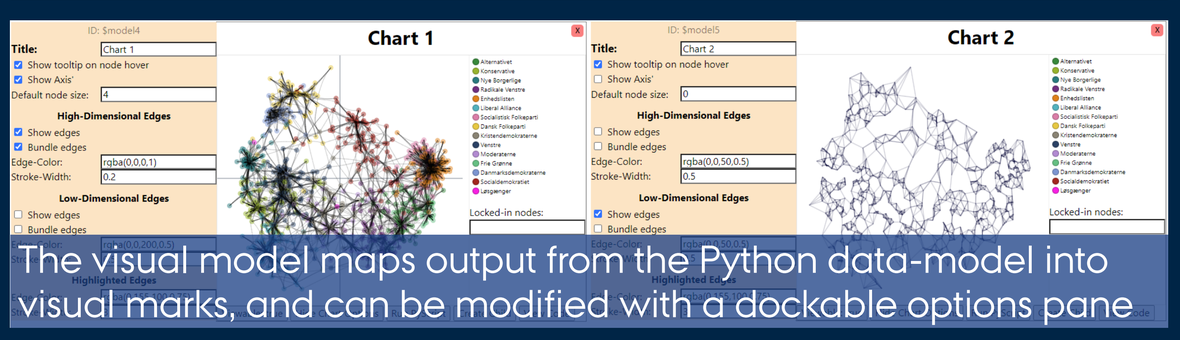
Charts hold a data model, a visual model and a view



Create your own setup with multiple, movable Charts

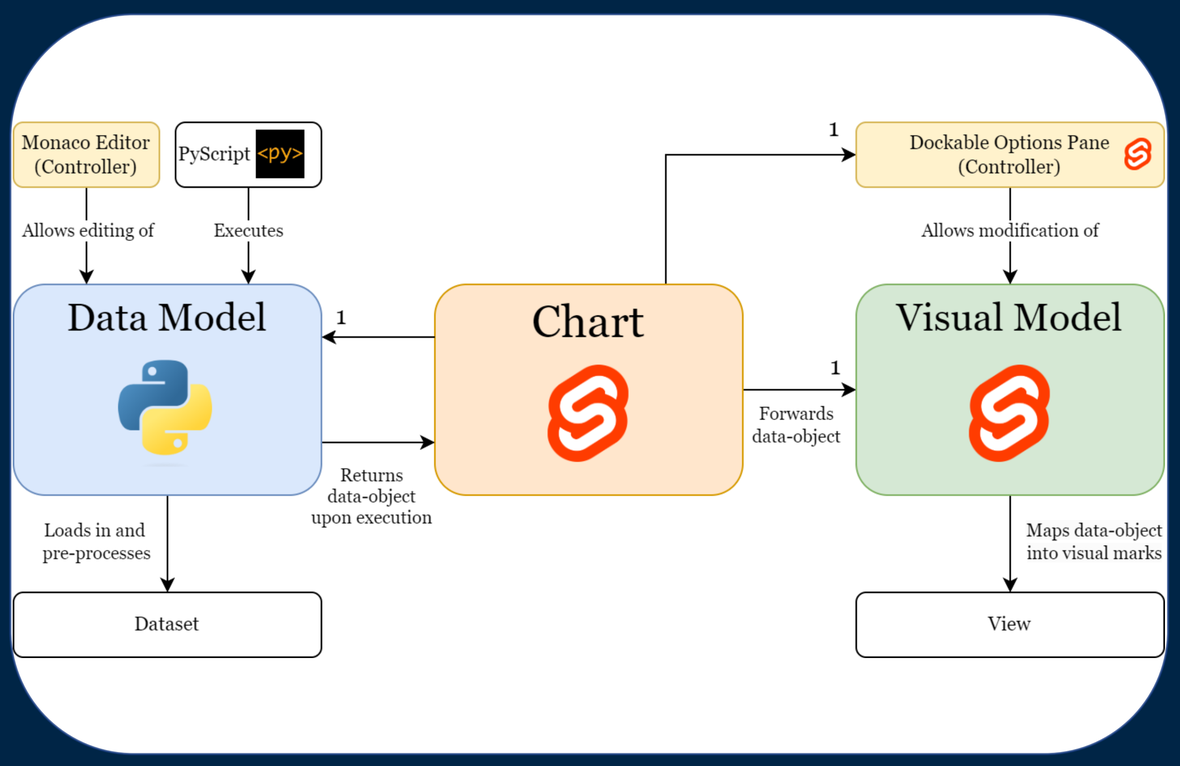


The data model consists of editable and executable Python code, for a smaller divide between pre-processing and visualisation



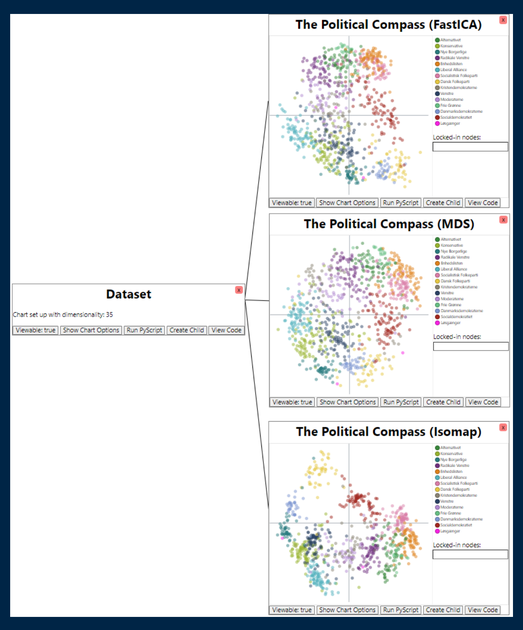
The visual model maps output from the Python data-model into visual marks, and can be modified with a dockable options pane

Architecture[1]

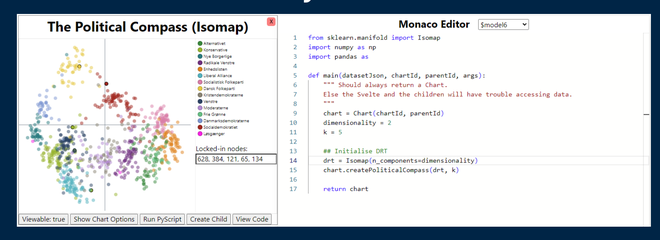


Key Features

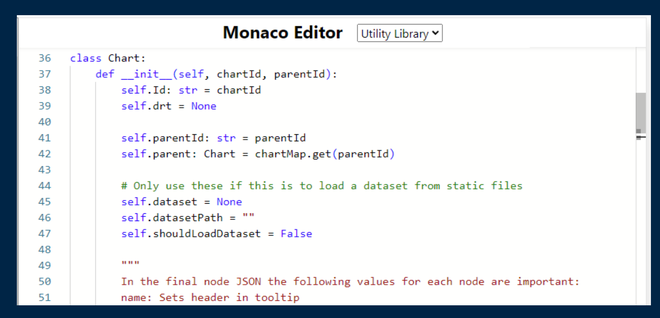
Create child Charts



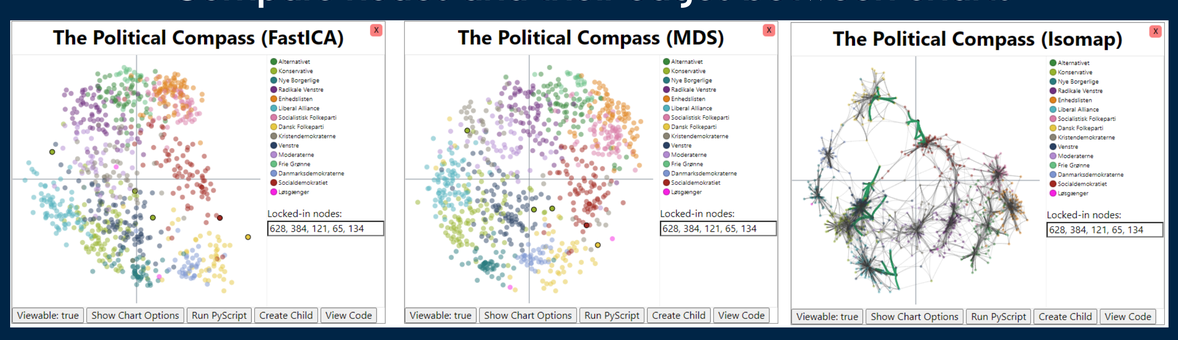
Common Python libraries[2]



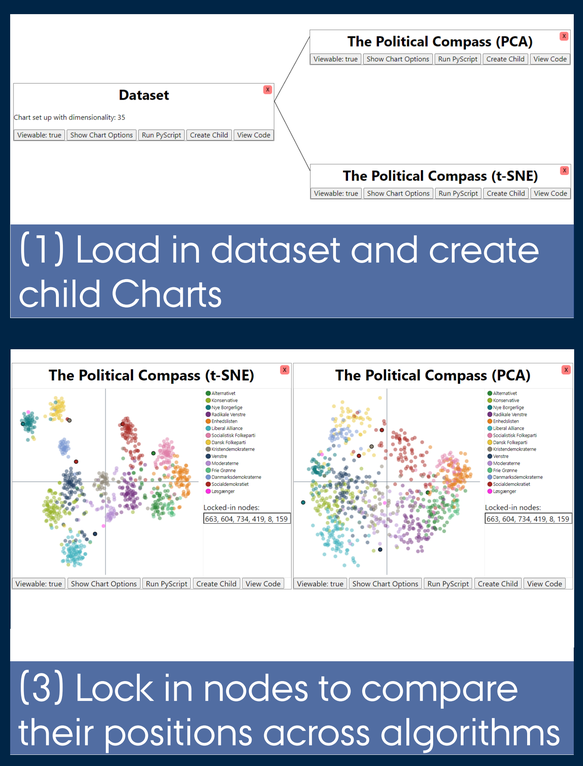
Code shared between Charts



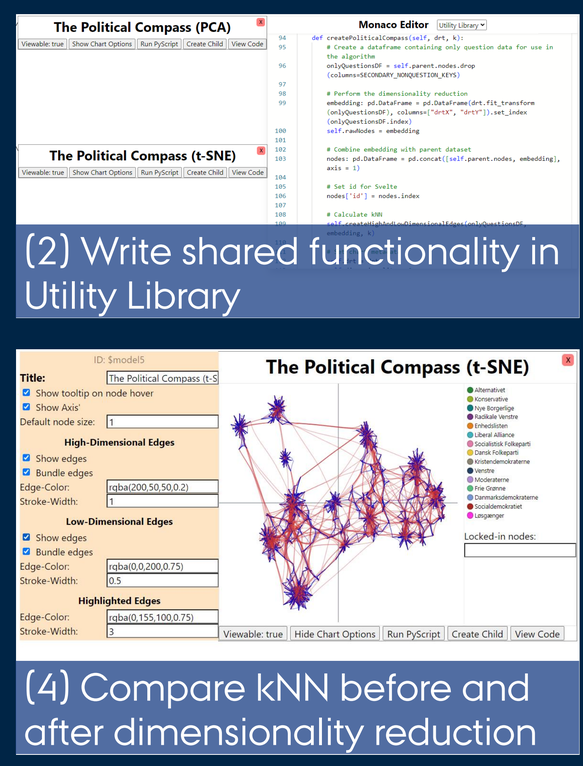
Compare nodes and their edges between charts



Case: The Political Compass



(1) Load in dataset and create child Charts



(2) Write shared functionality in Utility Library

(3) Lock in nodes to compare their positions across algorithms

(4) Compare kNN before and after dimensionality reduction

^1 Reminiscent of the *Visualization Reference Model* design pattern [Heer & Agrawala 2006]
^2 Examples are https://scikit-learn.org, https://pandas.pydata.org and https://numpy.org

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