PlotWeaver: XKCD/657 Automator

Problem
XKCD/657 presents a very compelling way to represent movie plots but unfortunately it is infeasible for the average person to create a similar graph.

Motivation
An automated tool that allows users to “weave” movie plots together with intuitive direct manipulation. Would allow everyone to create such visualizations for their favorite movies.

Approach
The space is segmented horizontally into time-slots. Each time-slot can facilitate character interactions where the lines are grouped together. The user inputs this ‘data’ with direct manipulation of the lines. A genetic algorithm is used to sort lines for minimal crossing and a force directed layout smoothes out the lines. Finally the lines (and labels) are drawn using Bezier splines.

Future Work
Improvements to UI and layout algorithms
Exporting to a vector format (e.g. SVG)
Automatic movie script parsing
Real time data weaving

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