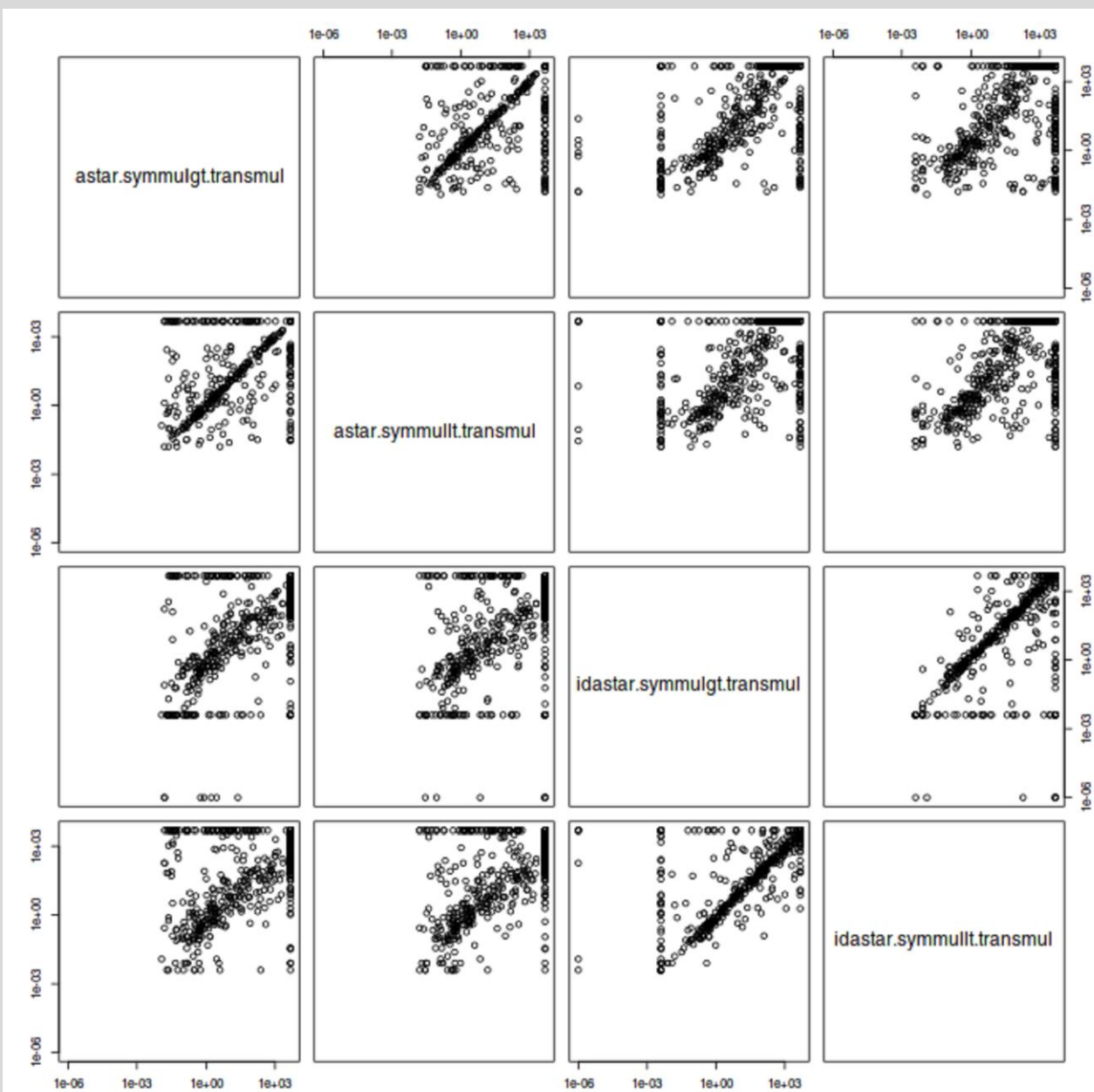


Interactive Visualizations for Aslib.net

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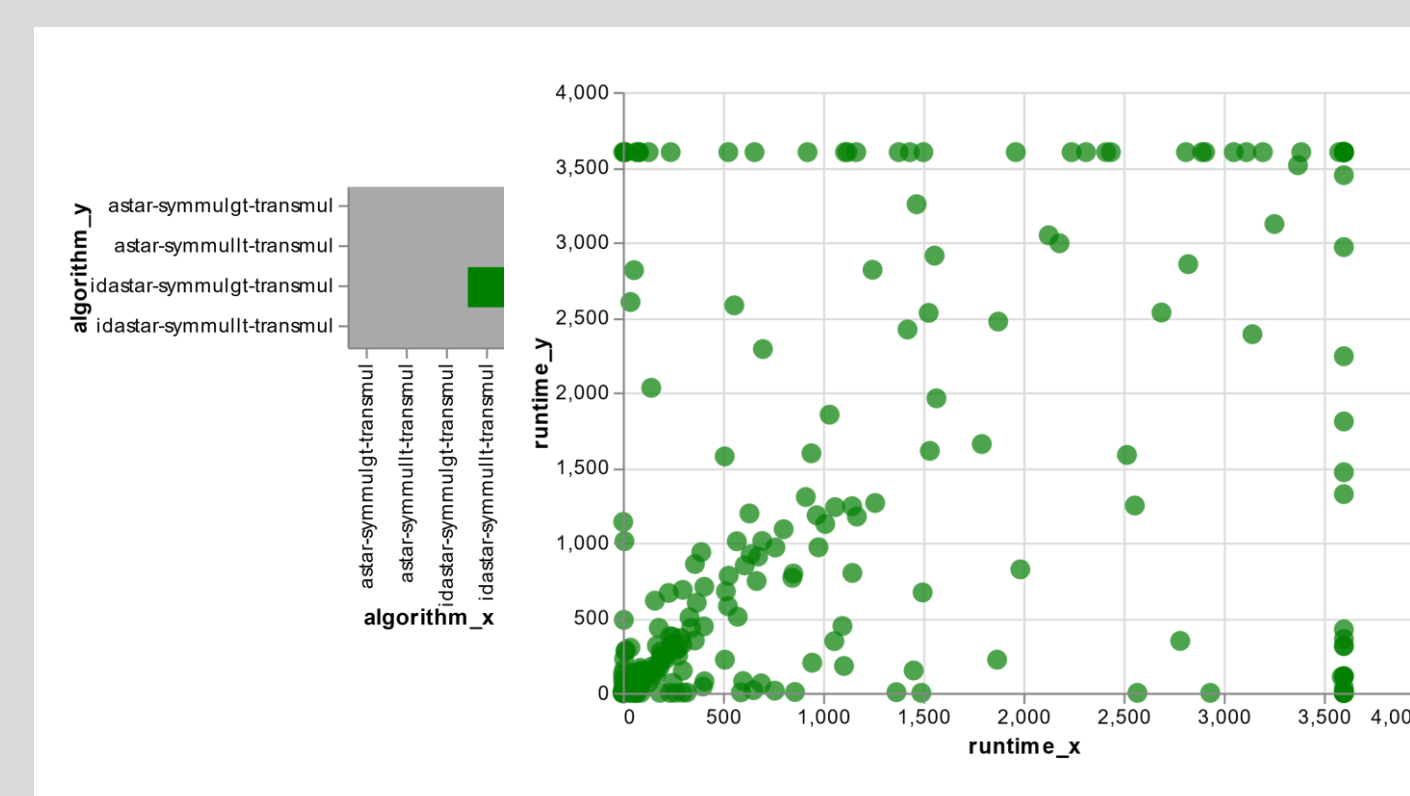
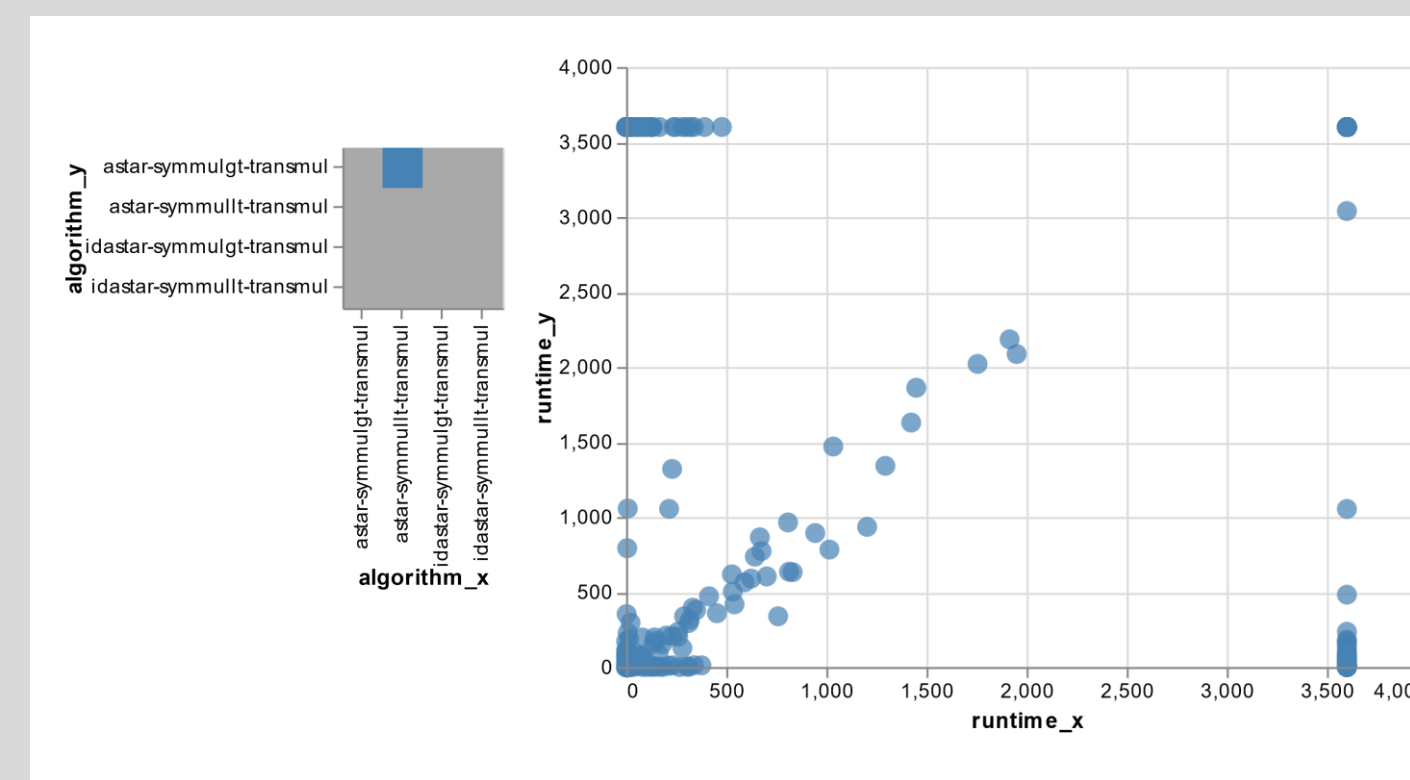
Compare Algorithms



The previous Aslib.net graphs showed a plot for every possible combination of algorithms. The CPMP_2015 chart to the left is just one example.

Instead, the interactive version allows the user to dynamically assign an algorithm to each axis.

Note: color variation added for poster contrast.



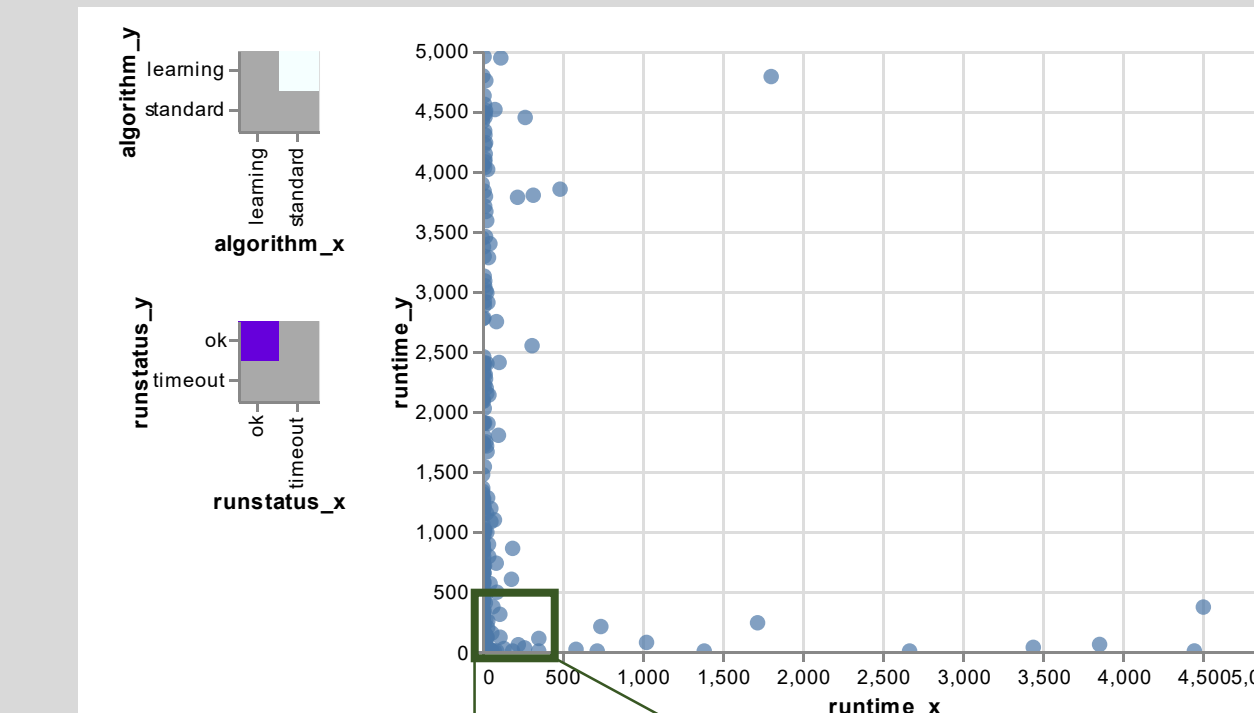
Why You Care

Aslib.net features data sets from 27 algorithm selection scenarios, but its previous graphs were static and nonspecific. The new, interactive graphs allow users to choose what data they want to see, and how.

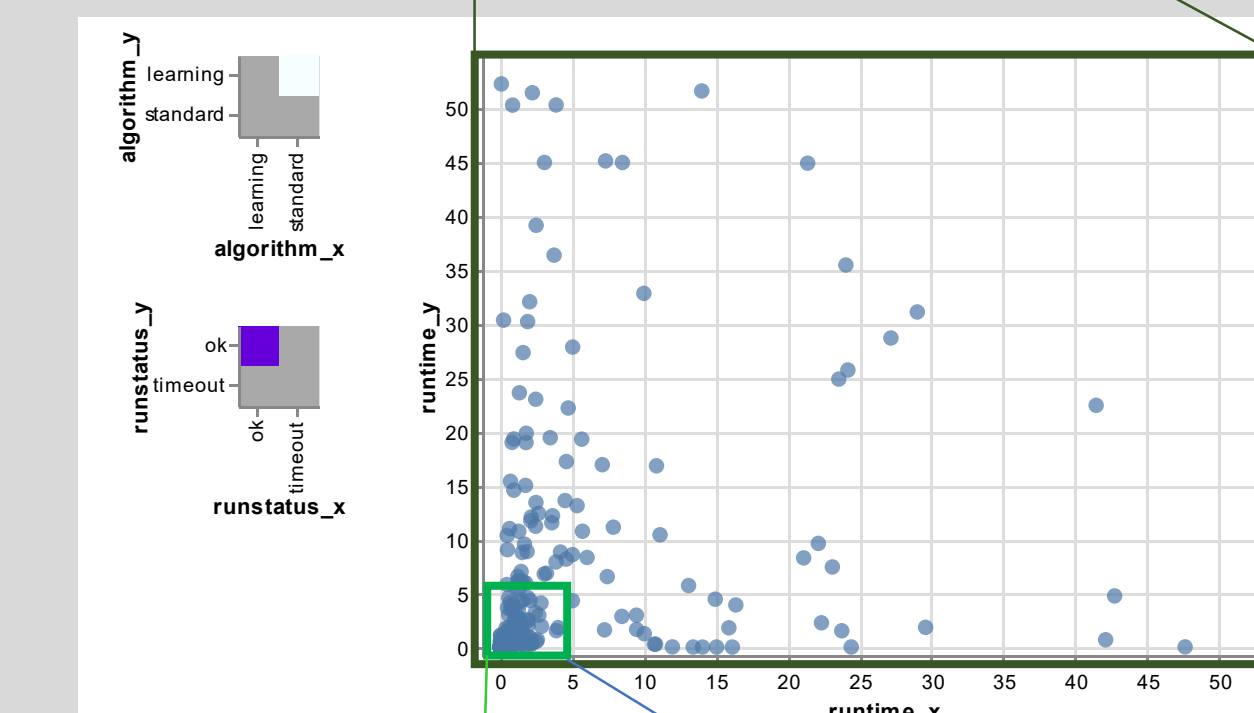
Now users can:

- Compare algorithms (test portfolio compatibility)
- View tooltips (get info on specific points)
- Filter out failed runs (see trends more clearly)
- Zoom and pan (see detail in dense clusters)

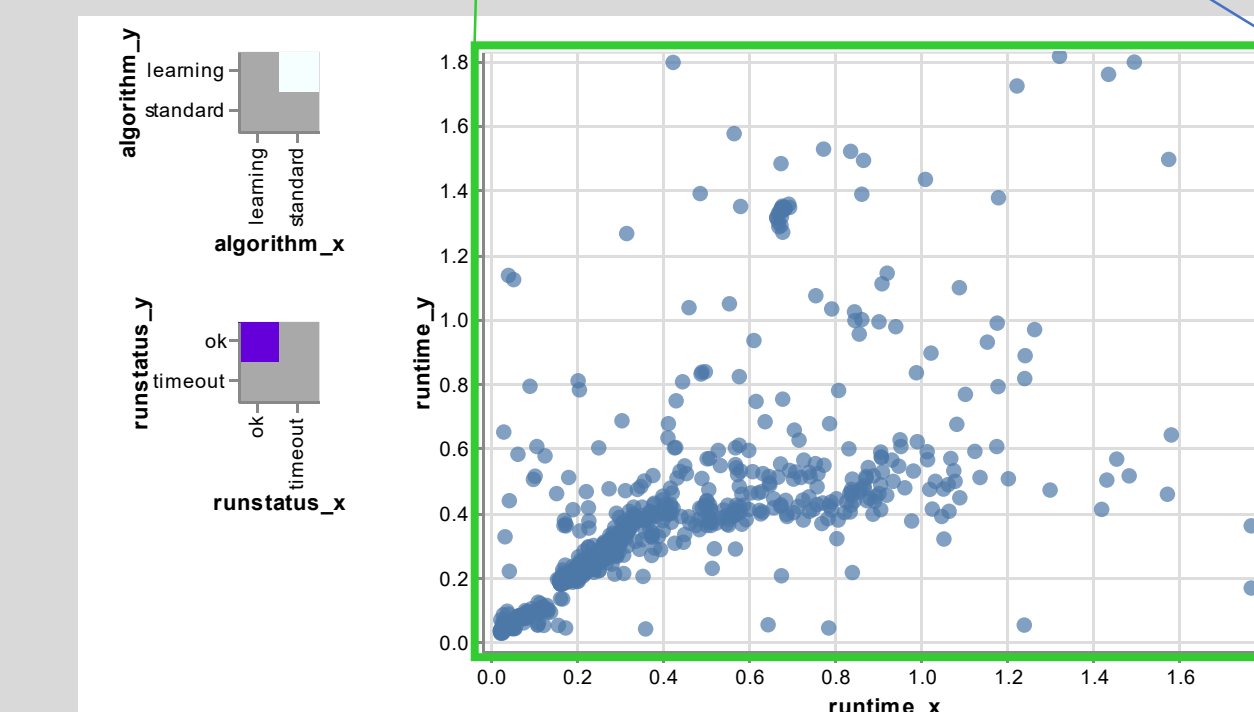
Zoom and Pan



The ability to pan and zoom now provides greater insight into densely-clustered points.

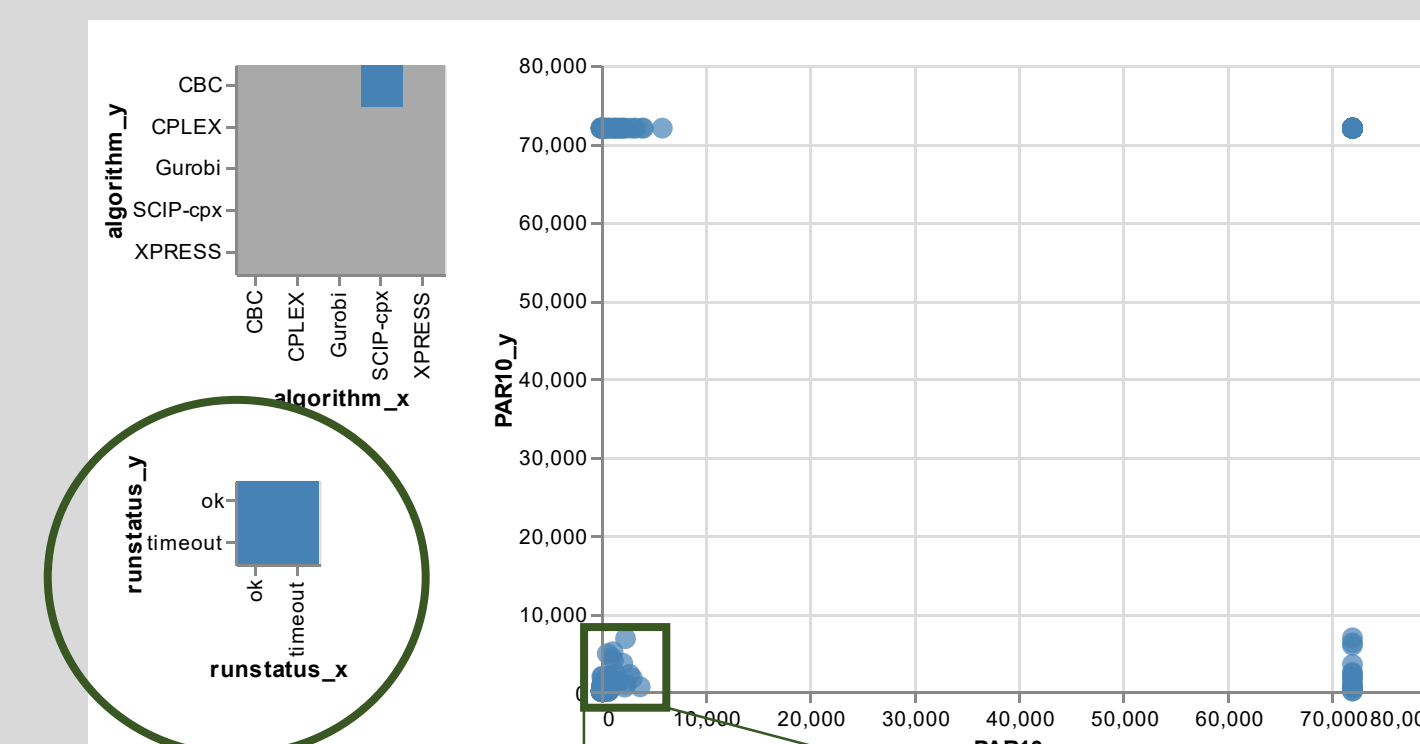


For example, in the CSP_2010 scenario, the “standard” model seems to dominate the “learning” model, except in a few cases.



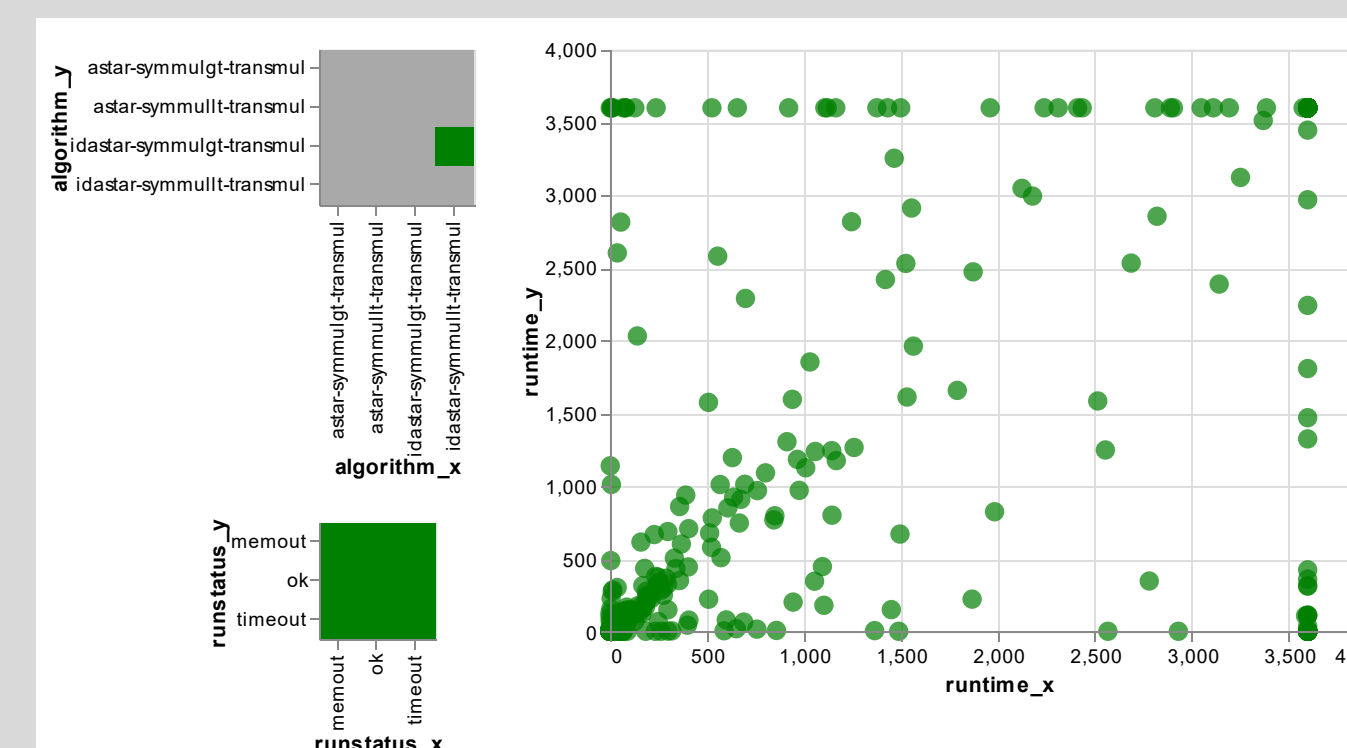
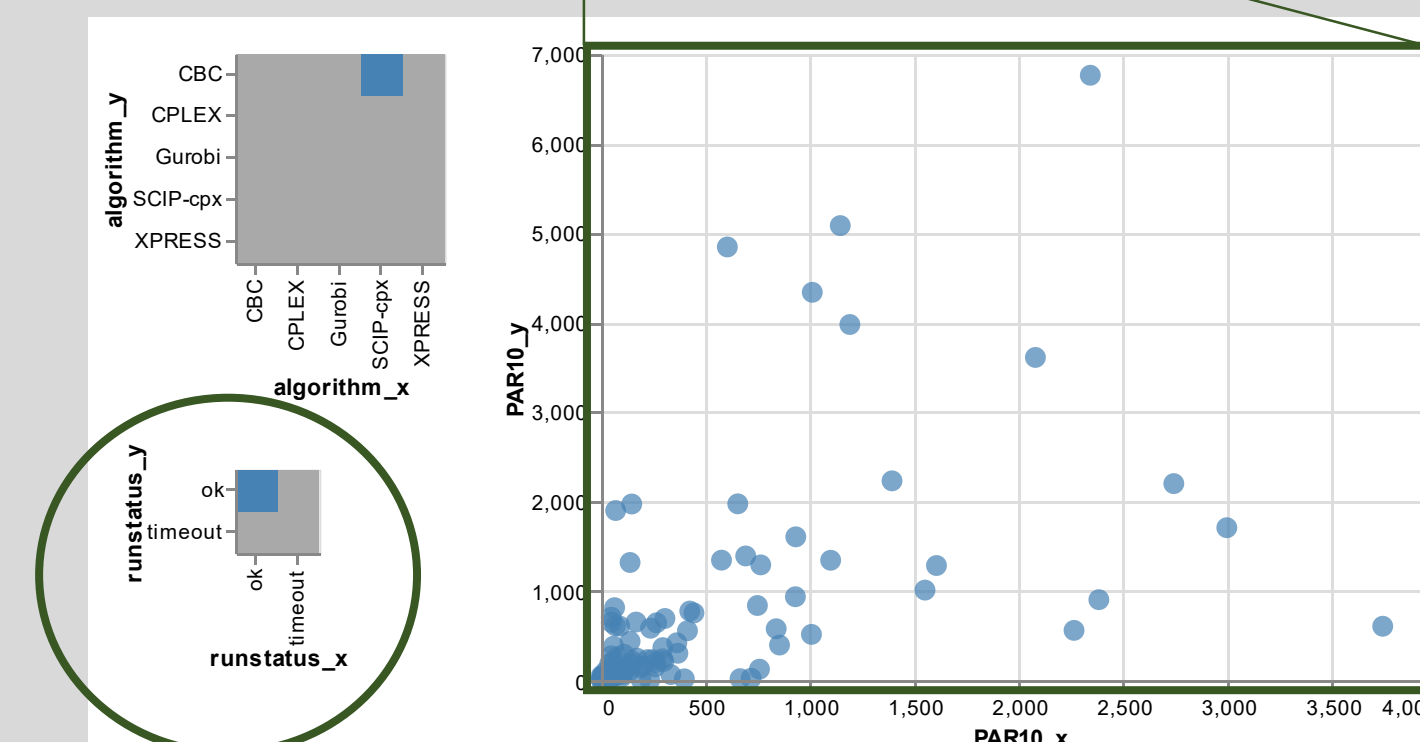
However, upon zooming in, it becomes learn that the “learning” model performs as well or better on short runs.

Filter Data



Users can select any combination of “ok”, “timeout”, and “memout” runs.

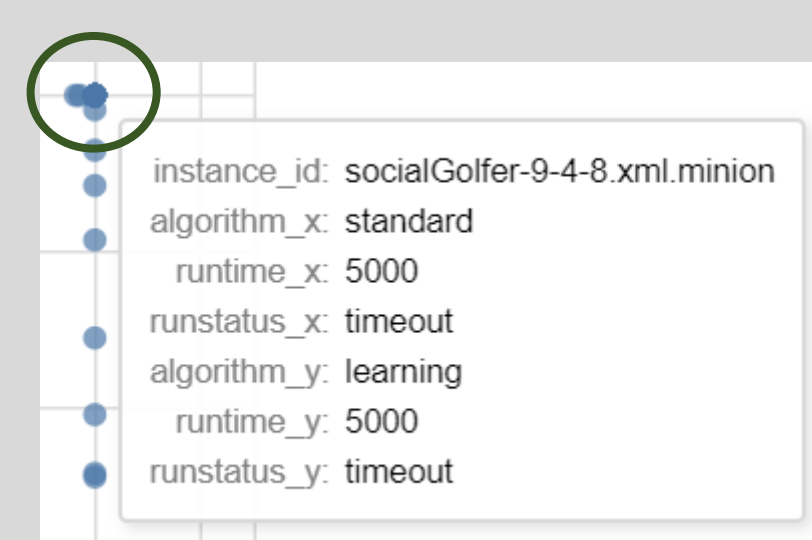
Filtering out failed runs improves automatic scaling.



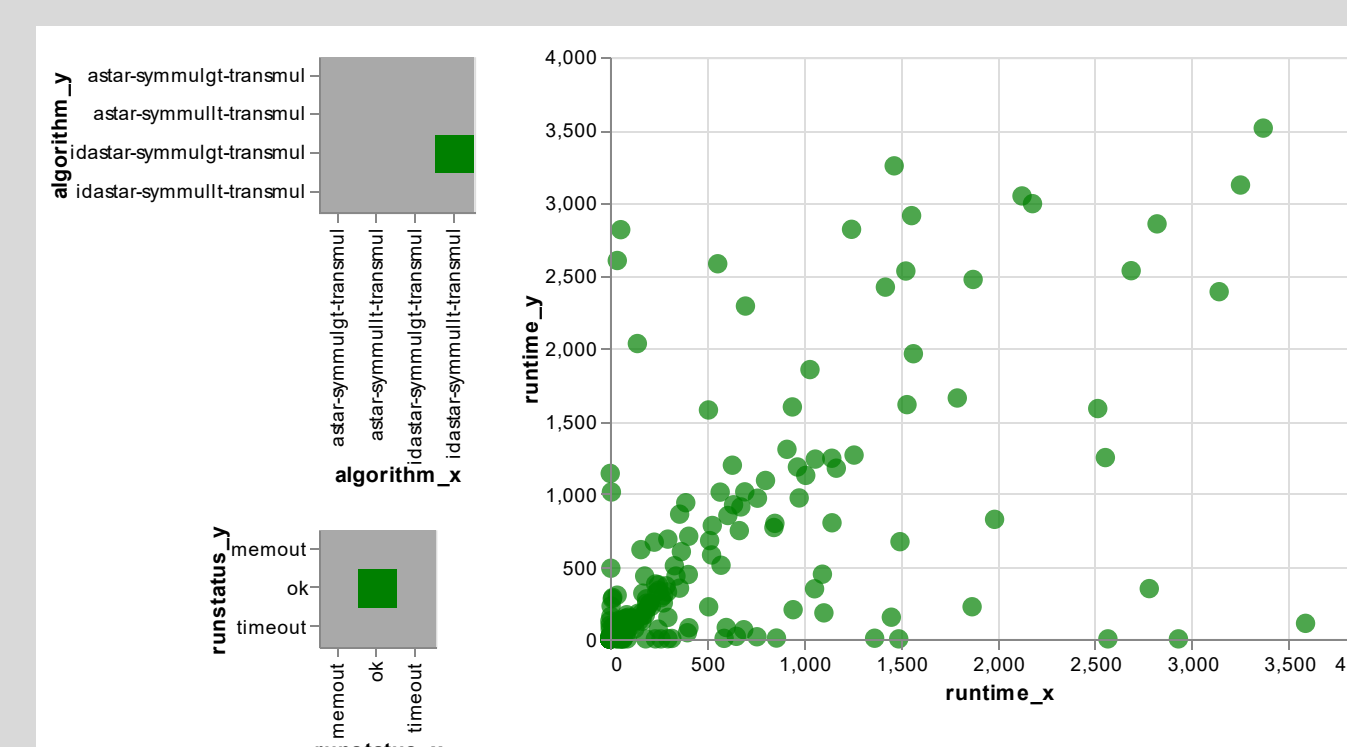
View Tooltips

What are these outliers?

Hovering the mouse over any point shows additional information.



Selecting only successful runs also cleans up the image, making it easier to see trends. This can be seen in the MIP_2016 scenario above, as well as CPMP_2015 to the right.



Future Work

- Add log transforms
- Scale comparisons to largest data sets
- Improve filter interface (selector color, initially only select one choice)
- Add more graph types
- Improve code reusability
- Improve comparison readability (add 1:1 line)