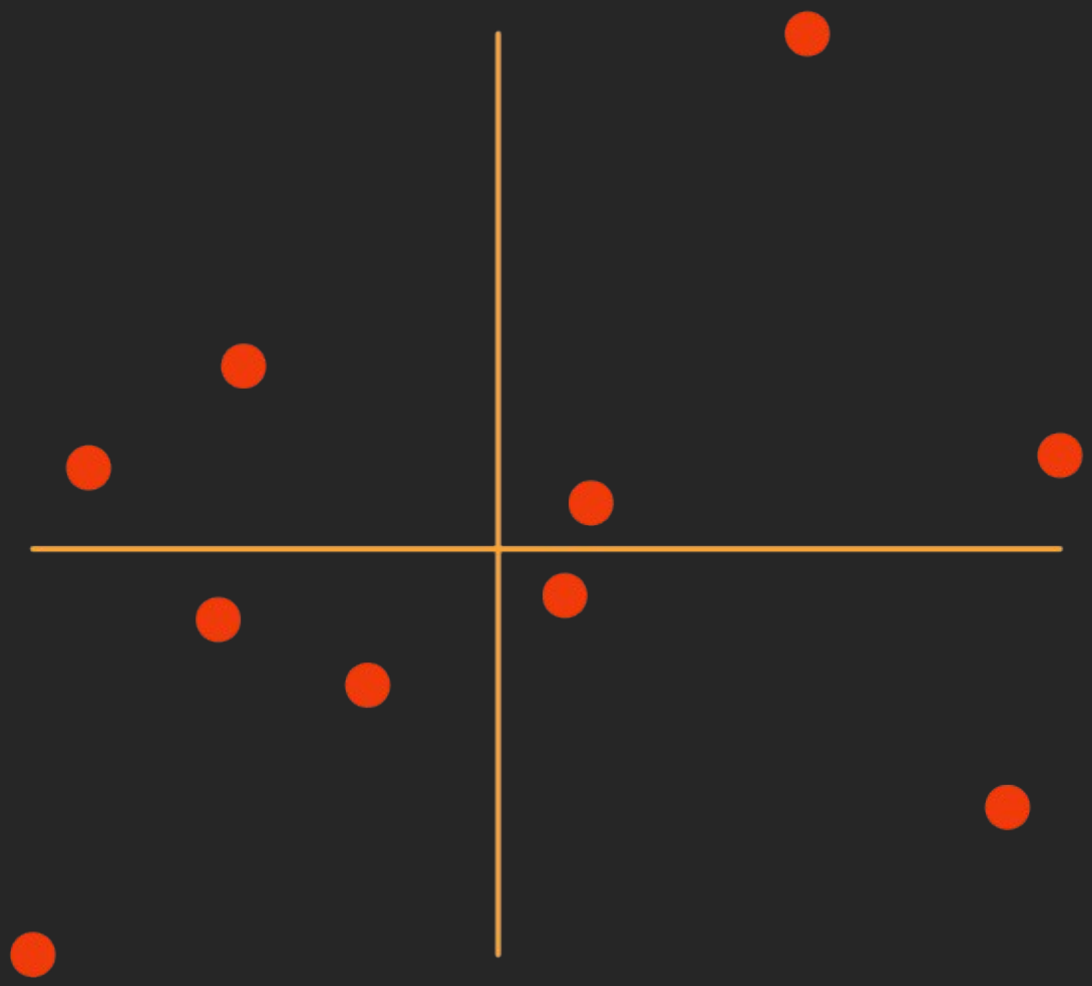
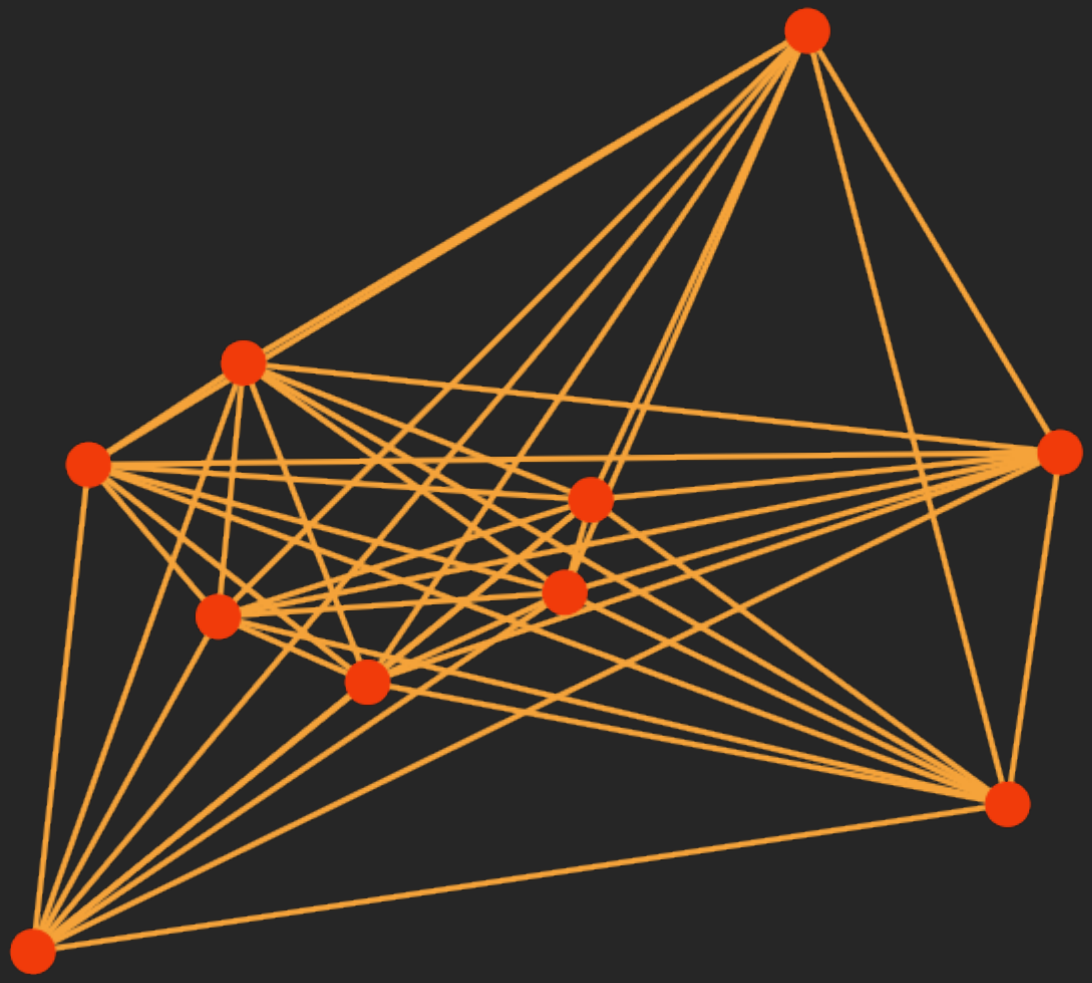
What to measure in trait-space?



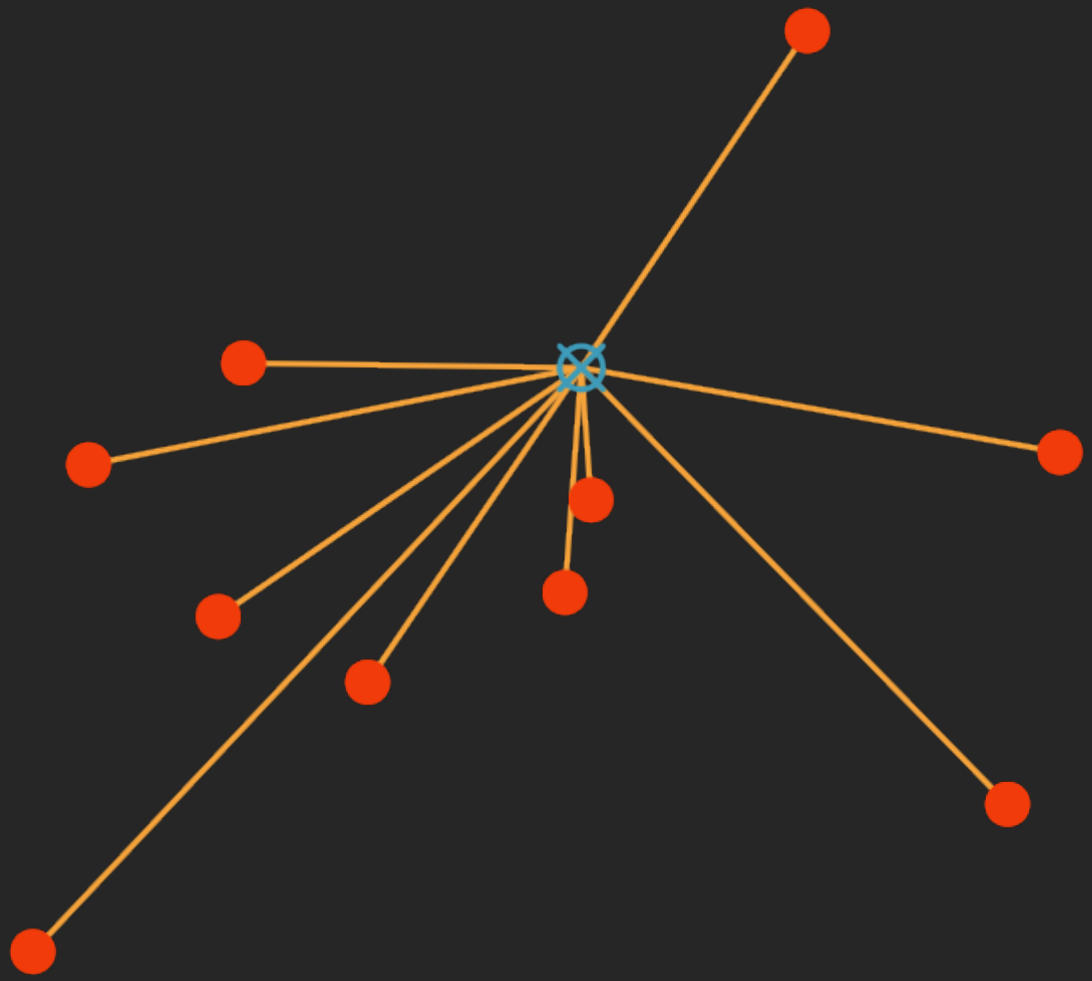
Volume (e.g. product of ranges)

What to measure in trait-space?



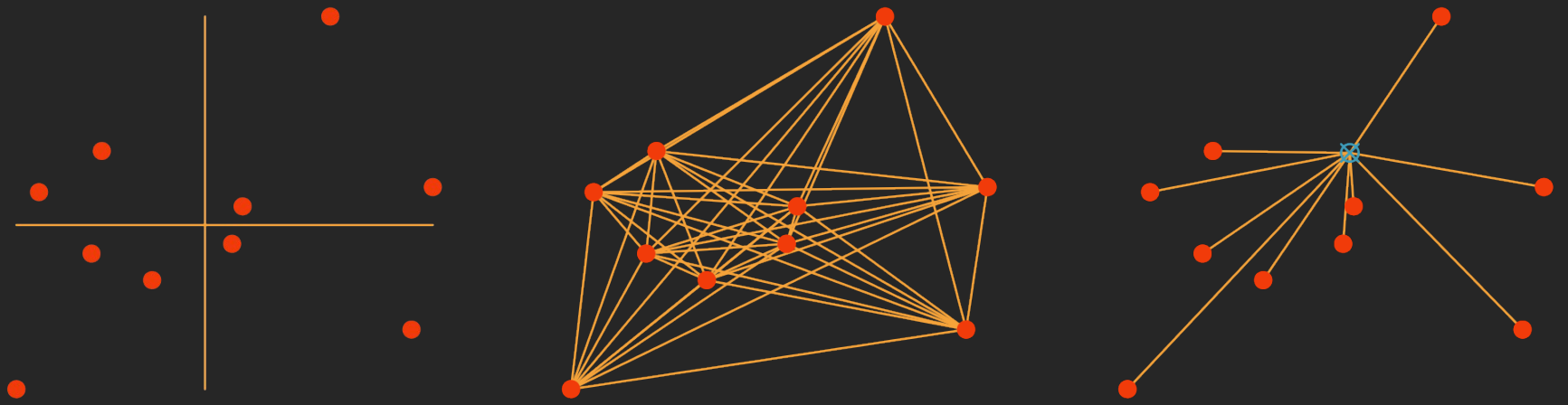
Density (e.g. pairwise distances)

What to measure in trait-space?



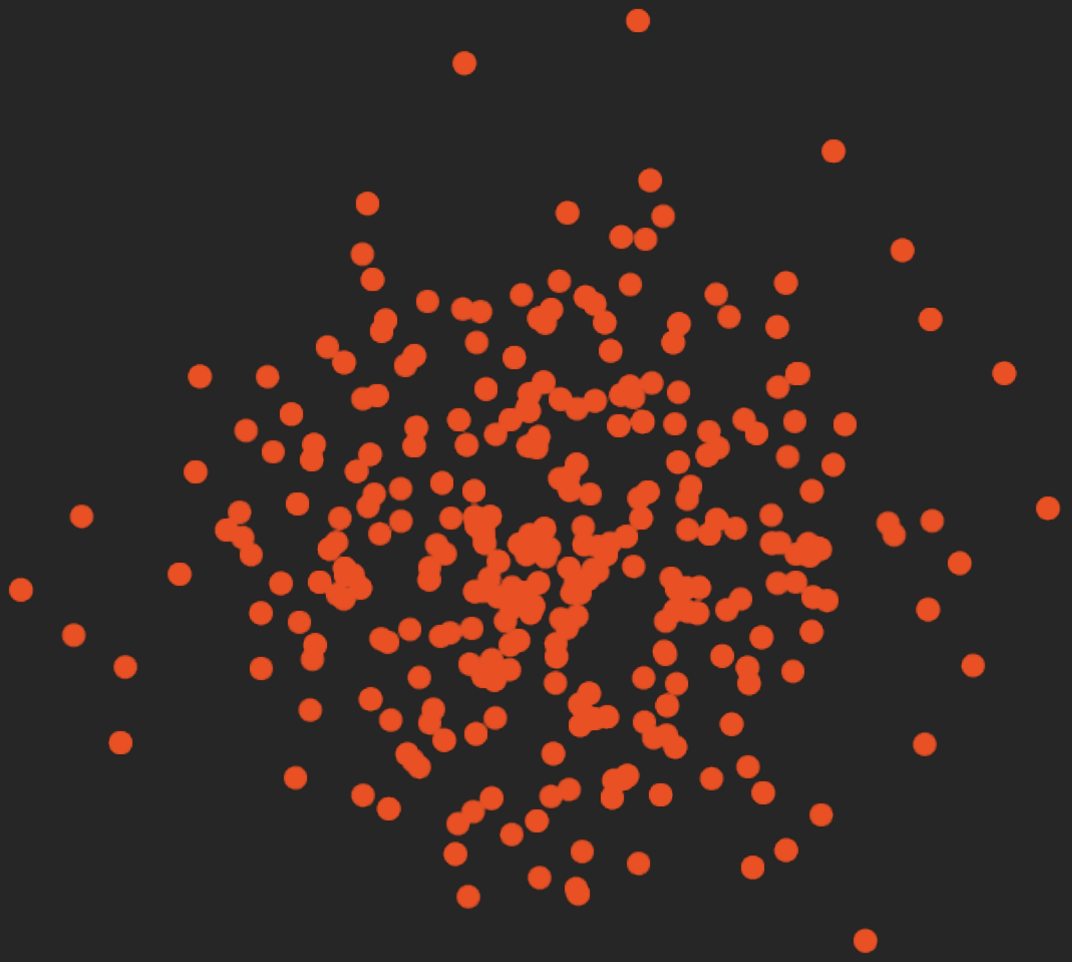
Position (e.g. distance from center)

What to measure in trait-space?

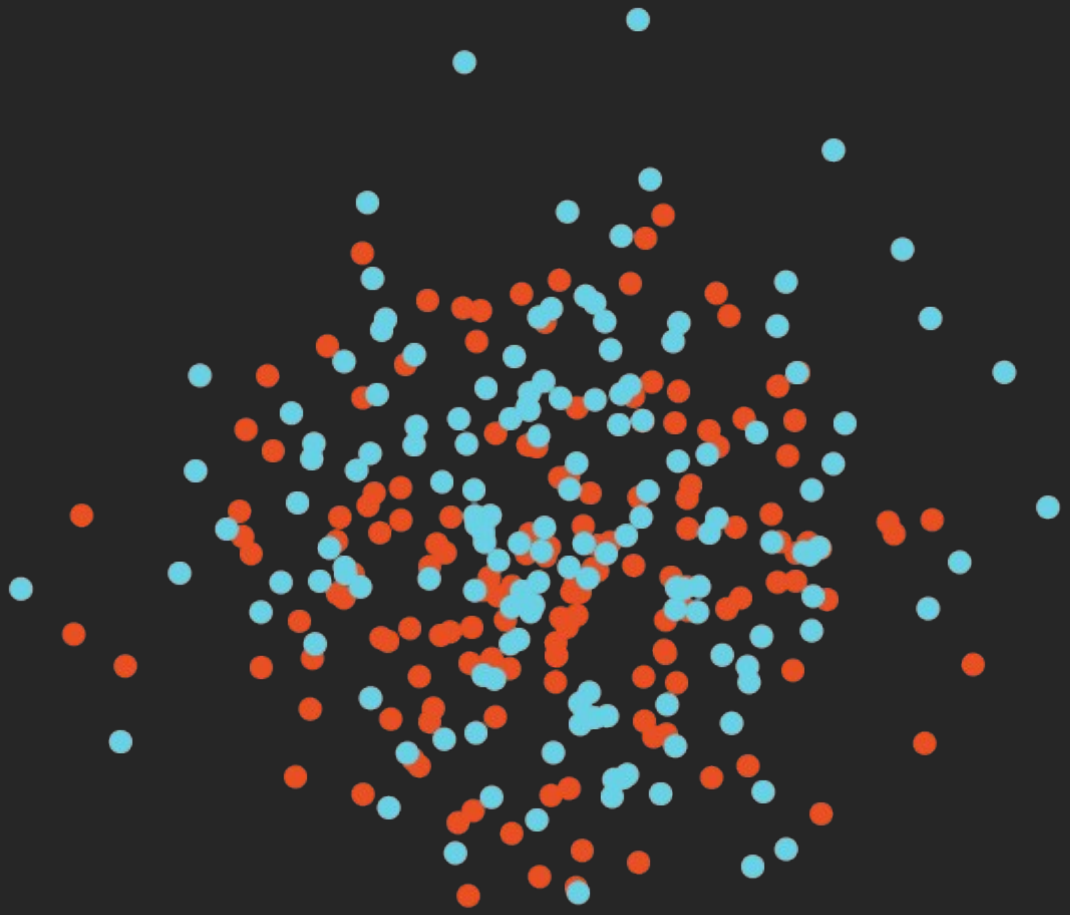


Volume & density & position?

How does the metric works in multidimensional space?

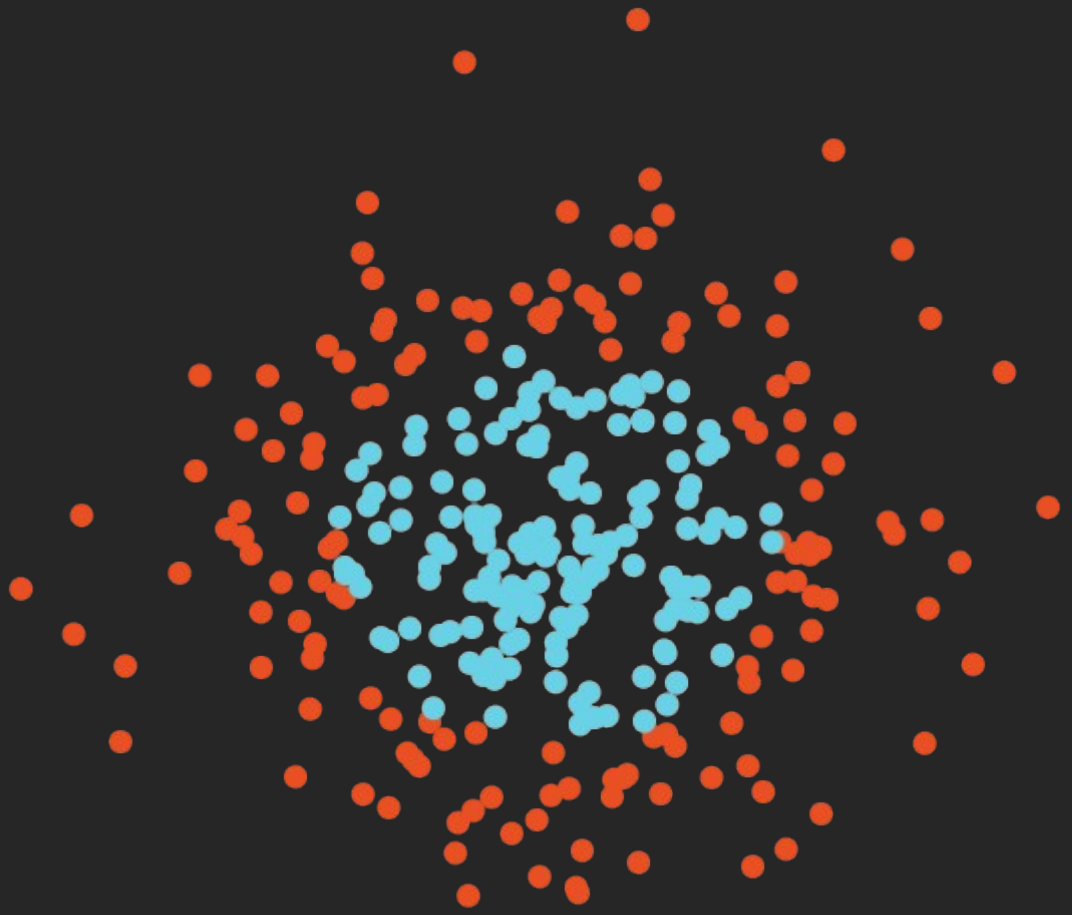


How does the metric works in multidimensional space?



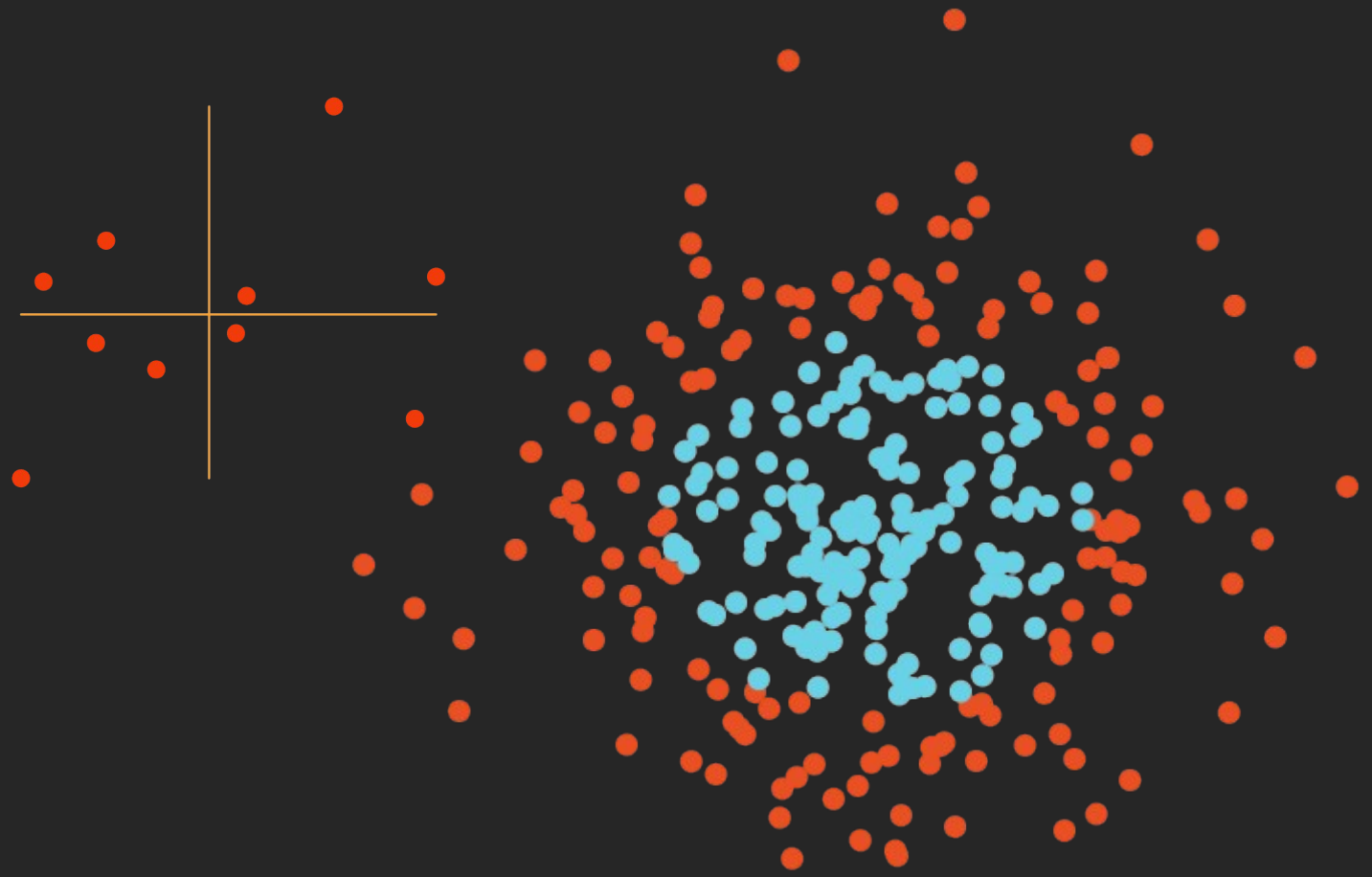
Random change (null)

How does the metric works in multidimensional space?



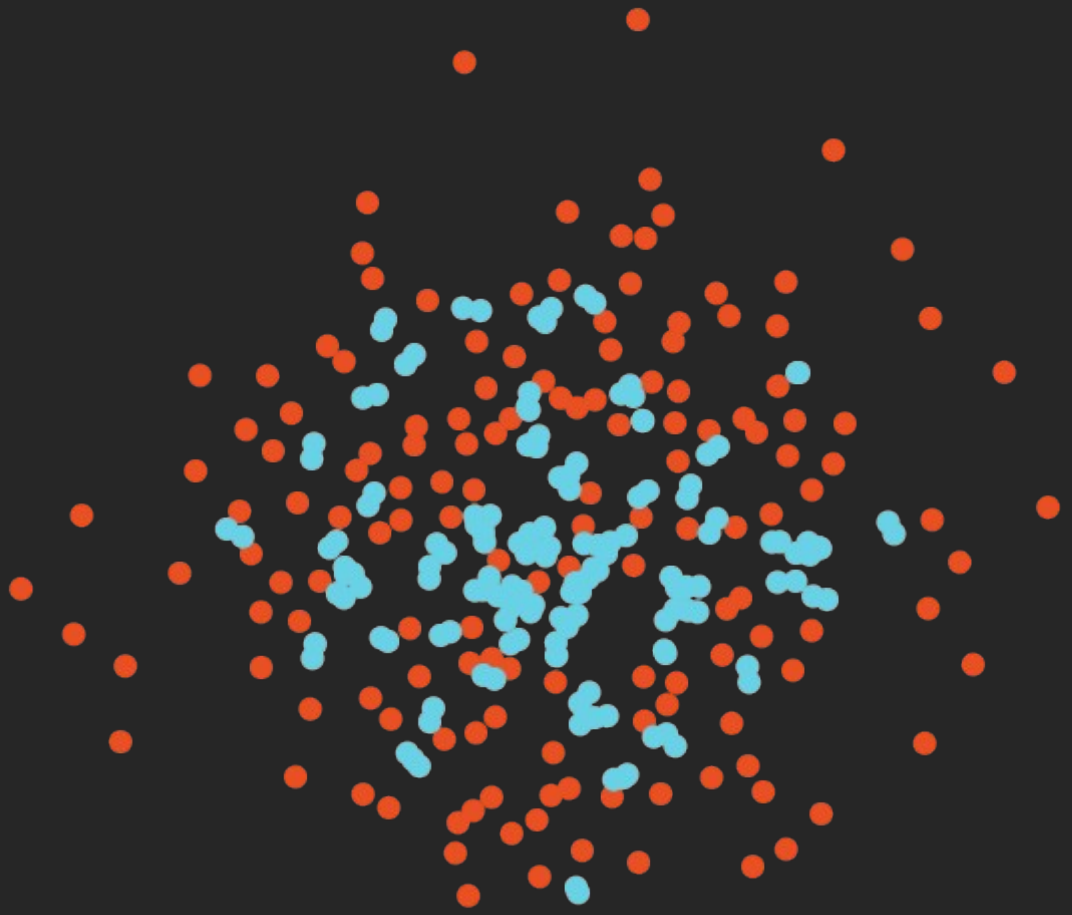
Volume change

How does the metric works in multidimensional space?



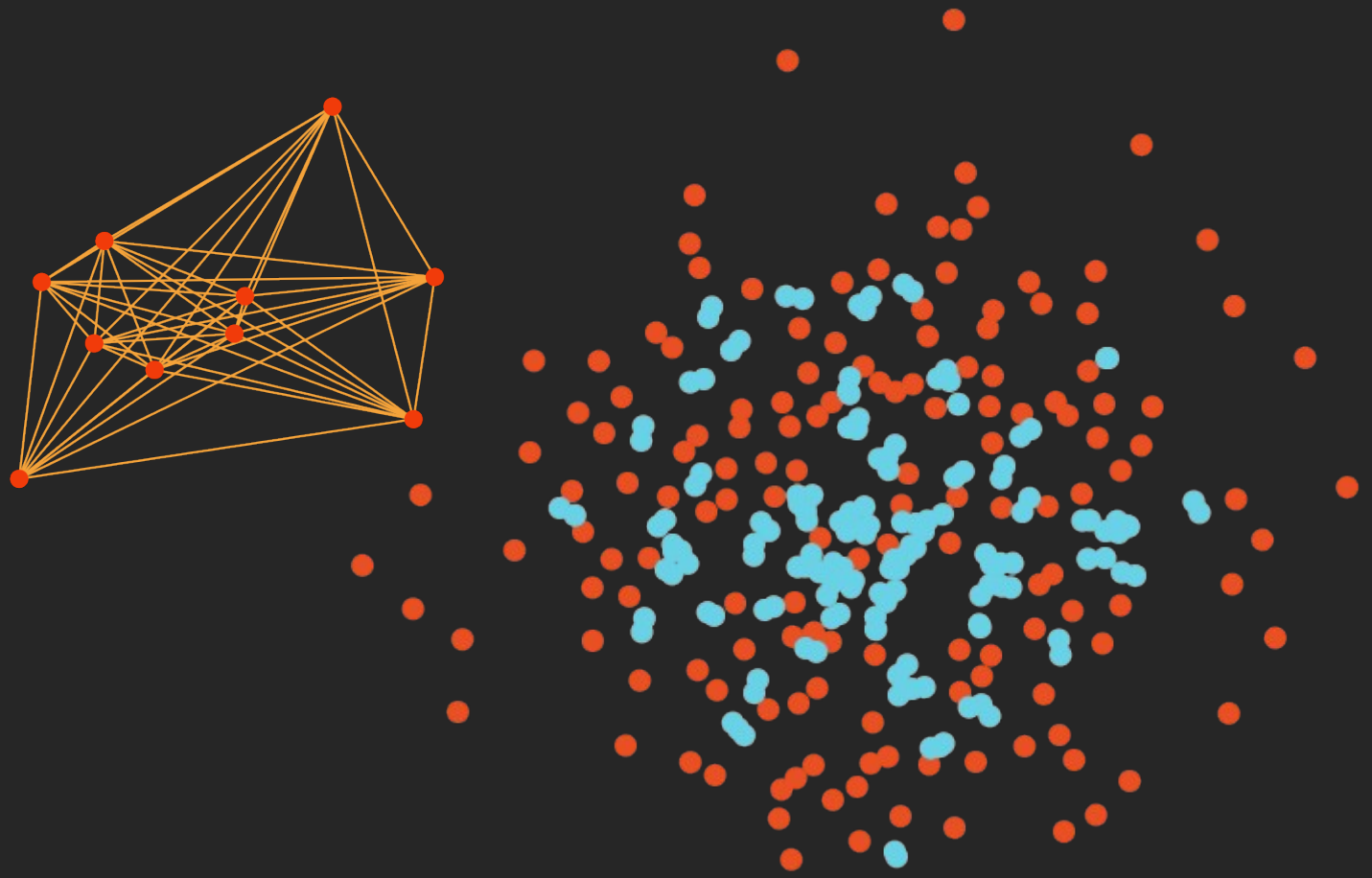
Volume change

How does the metric works in multidimensional space?



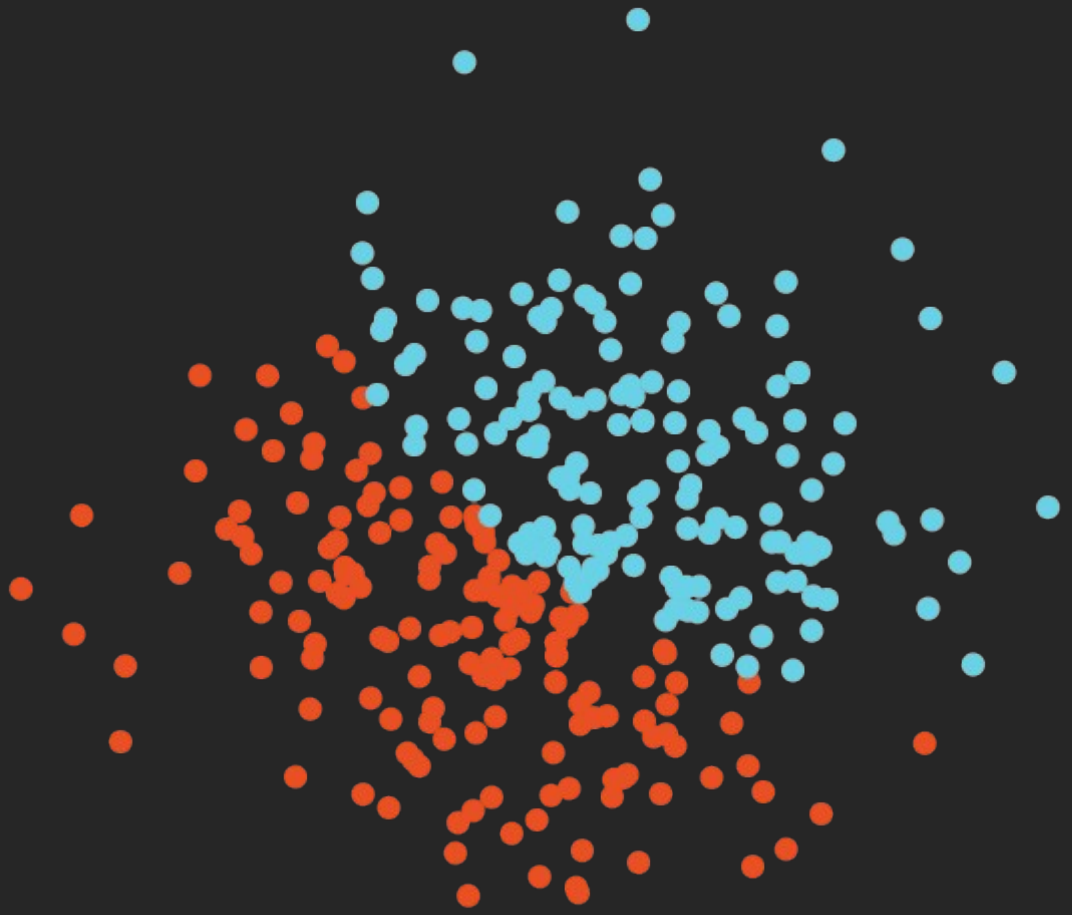
Density change

How does the metric works in multidimensional space?



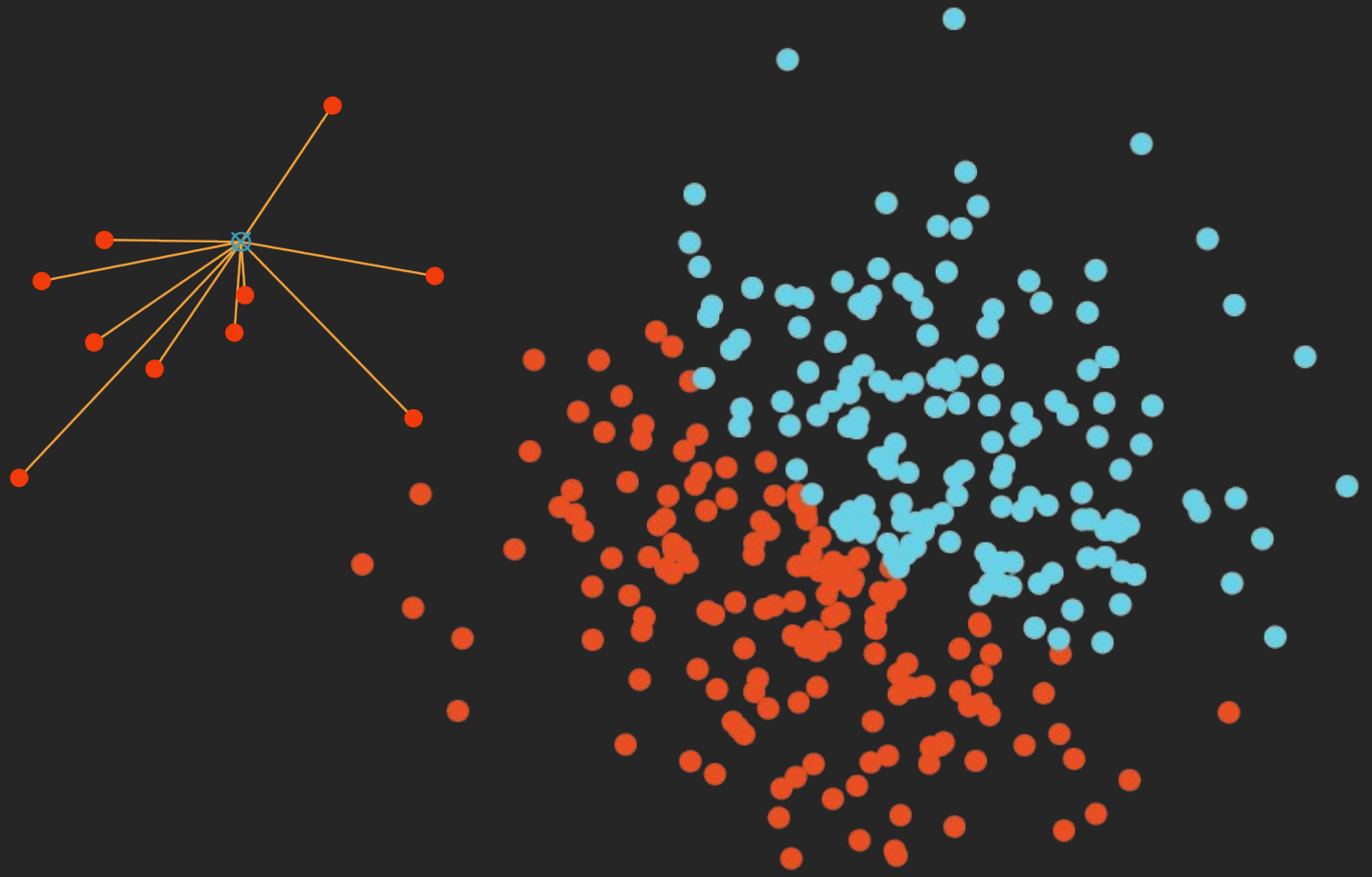
Density change

How does the metric works in multidimensional space?

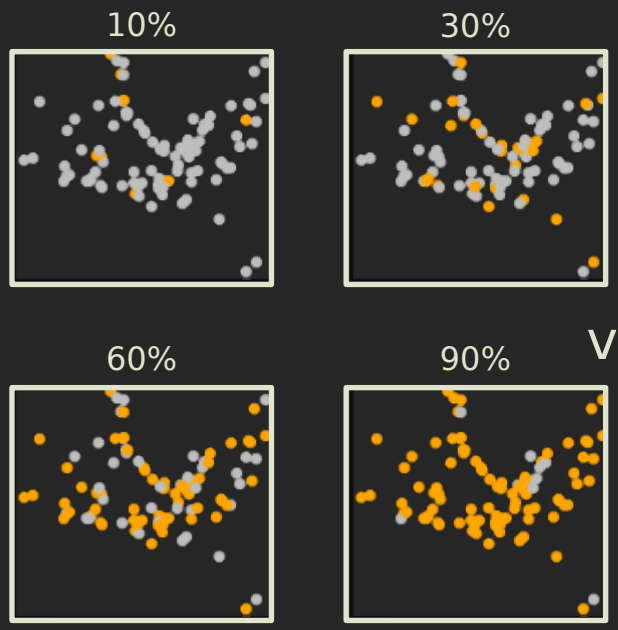


Position change

How does the metric works in multidimensional space?



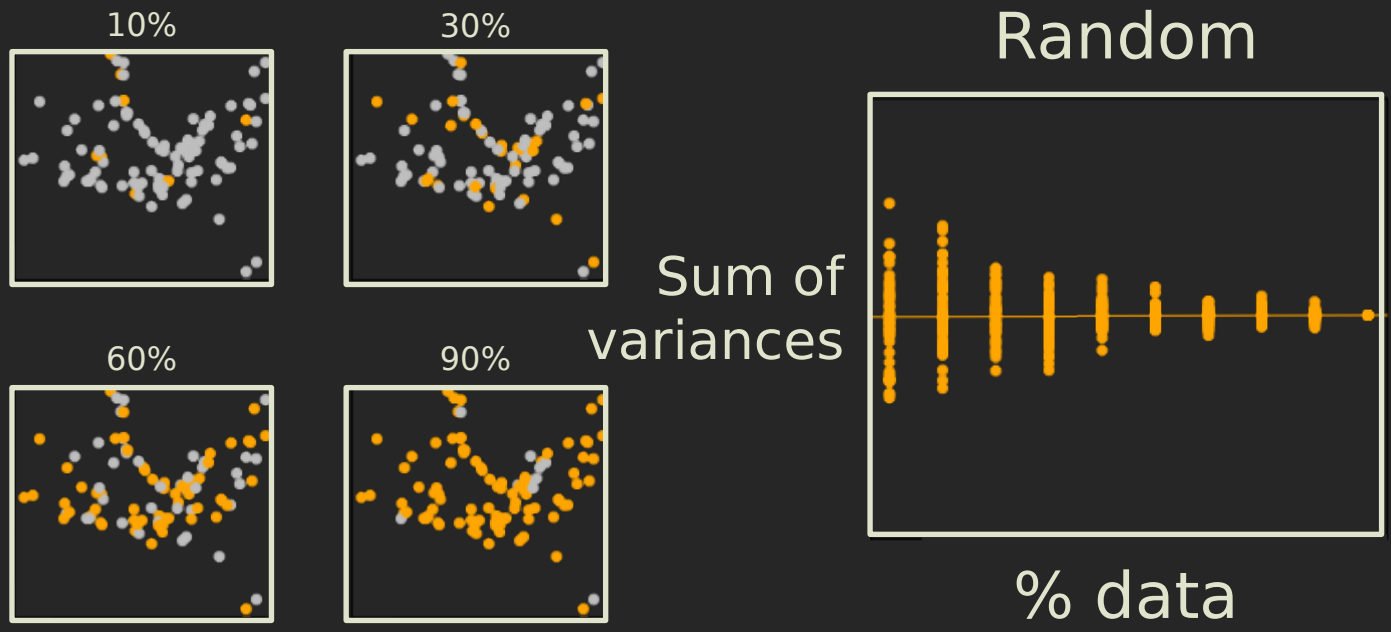
Position change

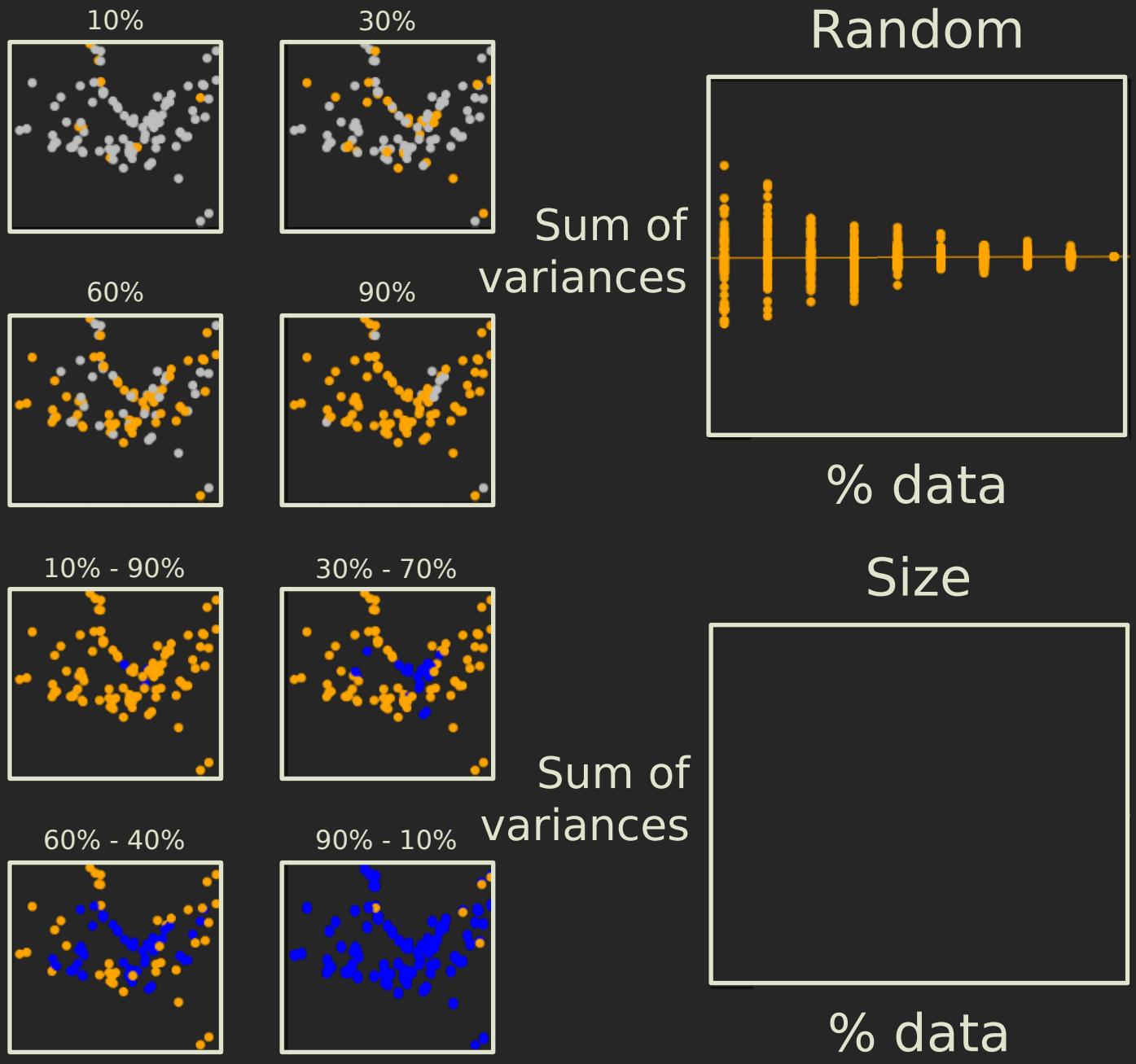


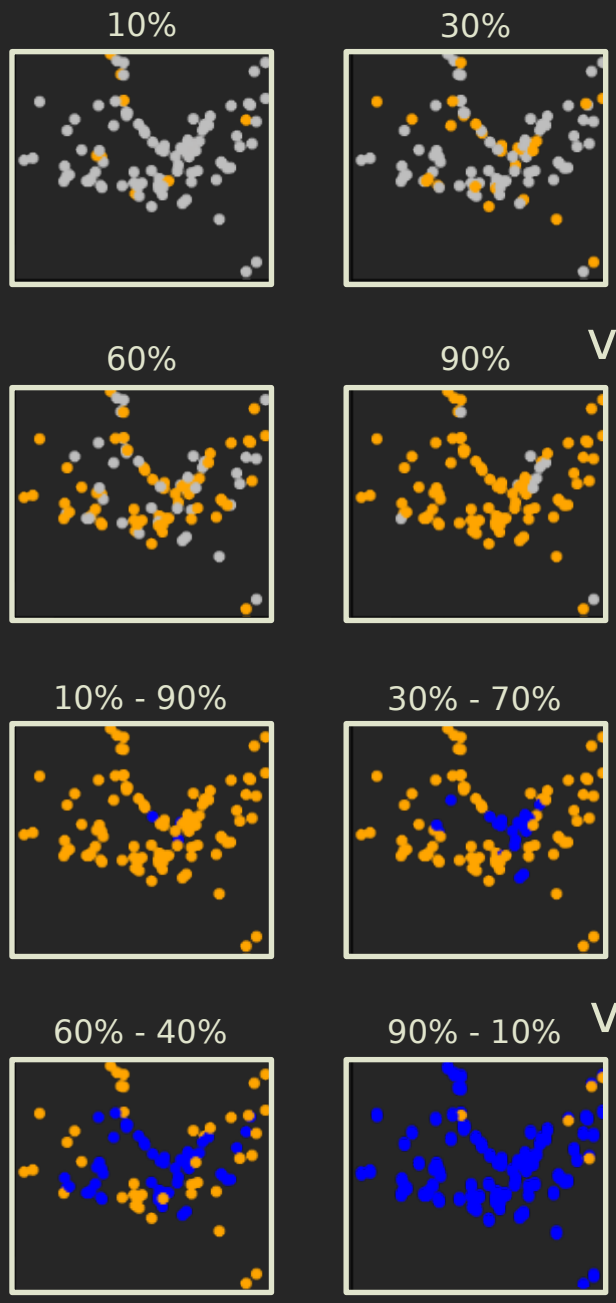
Sum of variances

Random

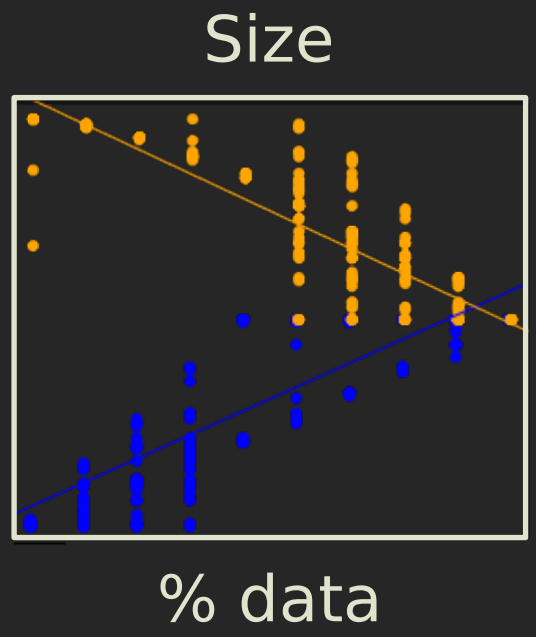
% data

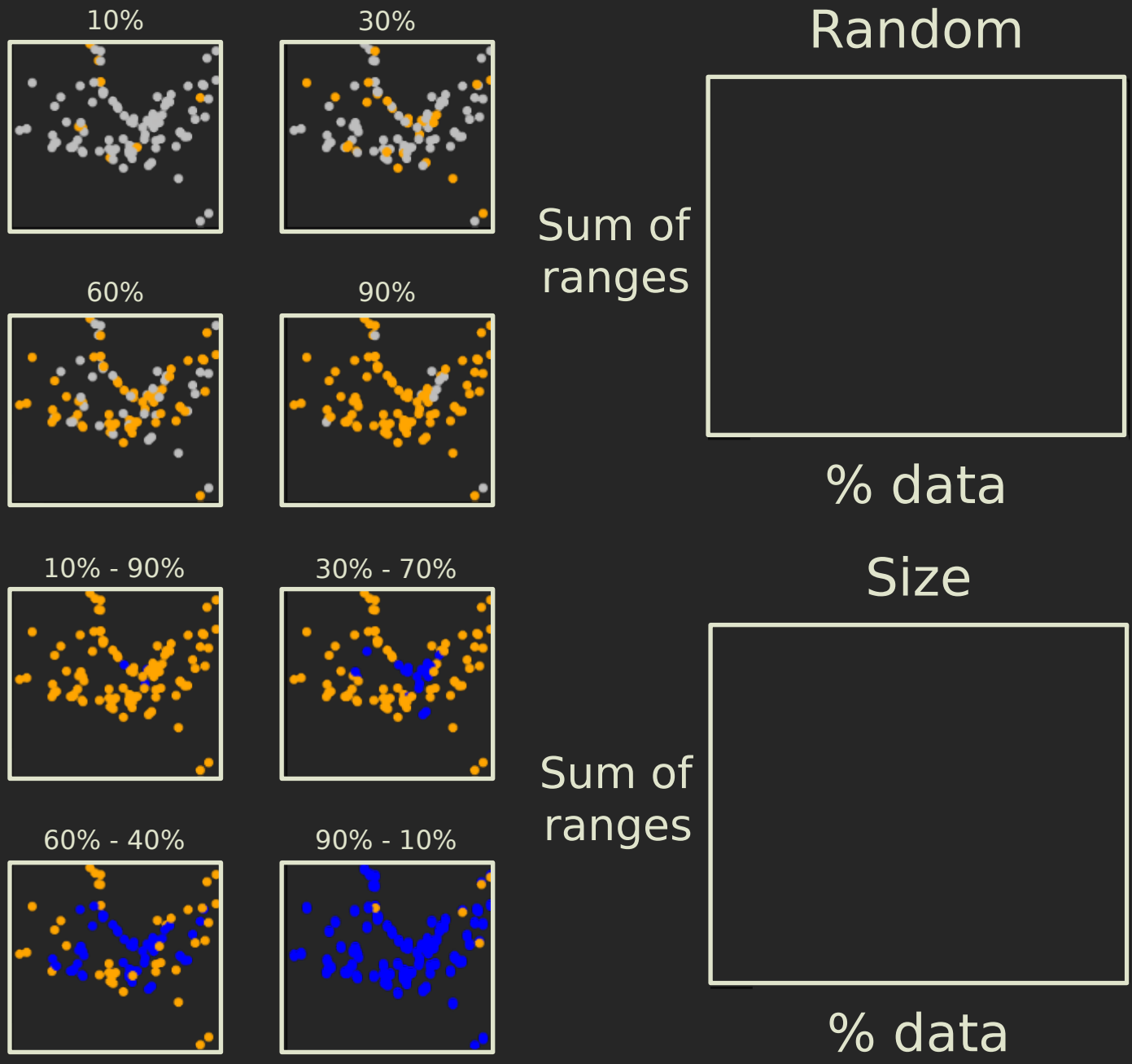

10%
30%
60%
90%
Random
Sum of variances
% data

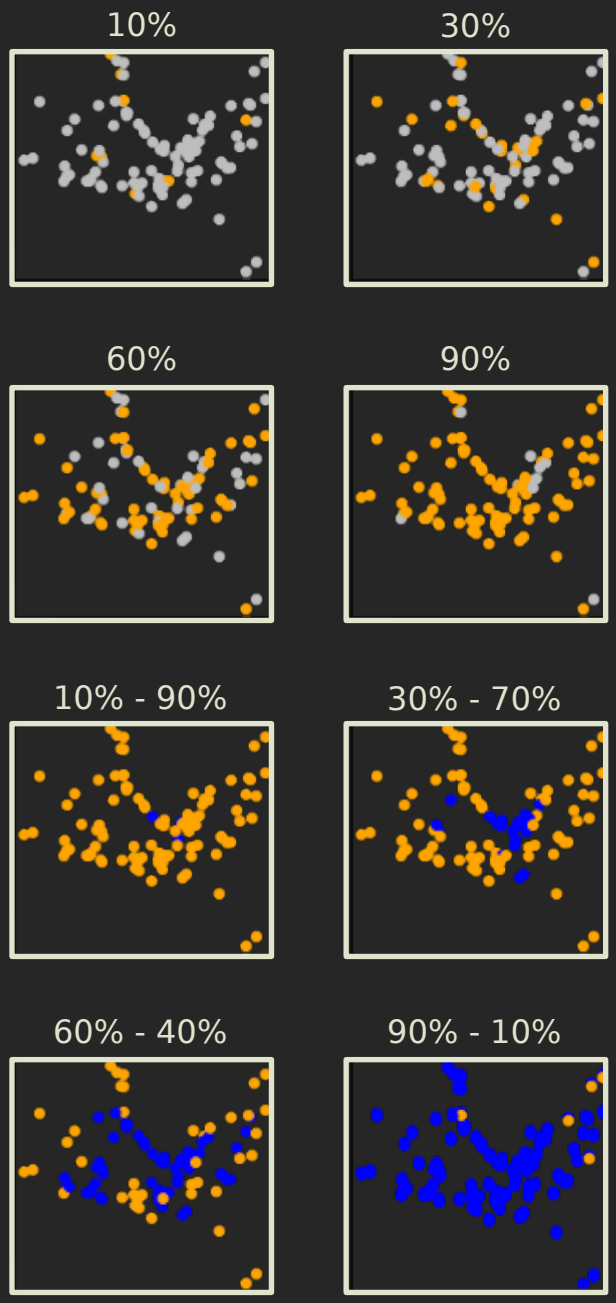

10%
30%
60%
90%
10% - 90%
30% - 70%
60% - 40%
90% - 10%
Random
Sum of variances
% data
Size
Sum of variances
% data

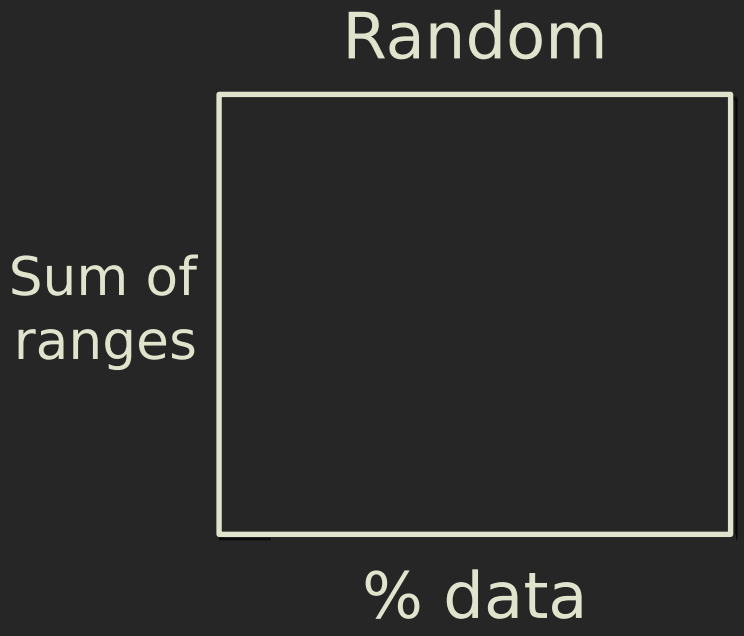

10%
30%
60%
90%
10% - 90%
30% - 70%
60% - 40%
90% - 10%

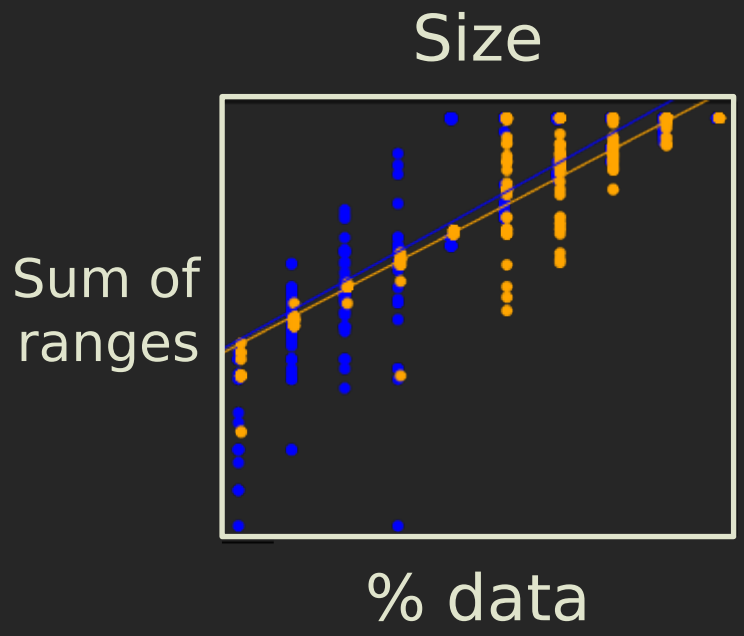

Random
Sum of variances
% data

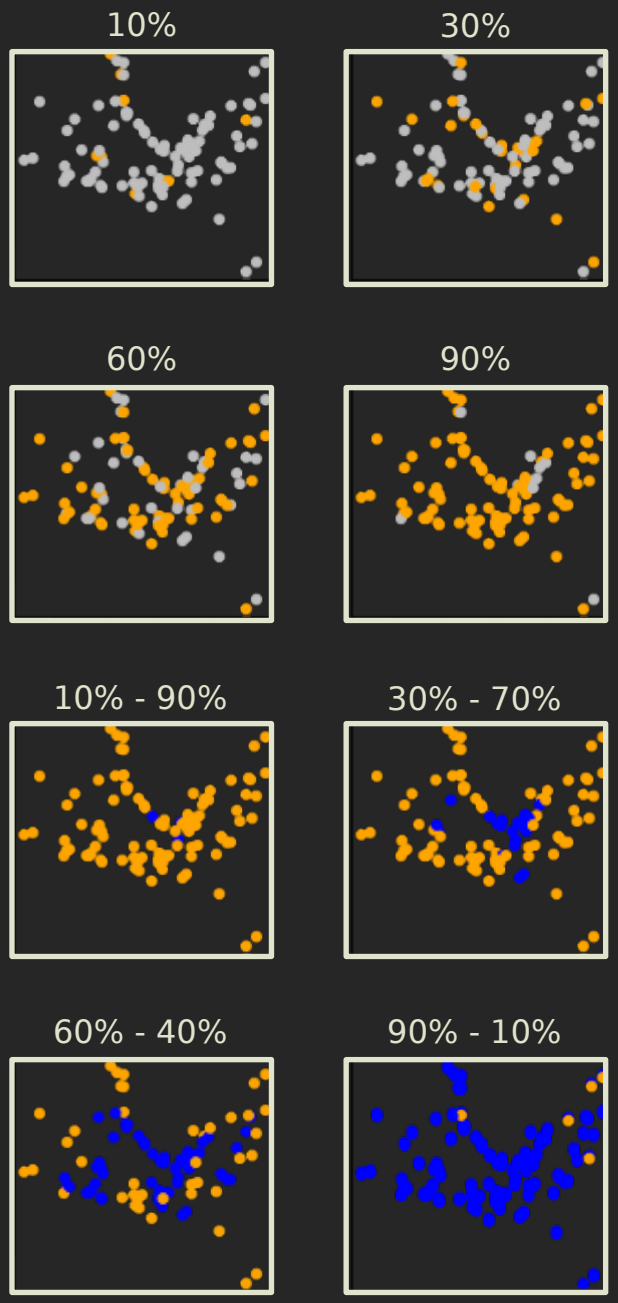

Size
Sum of variances
% data

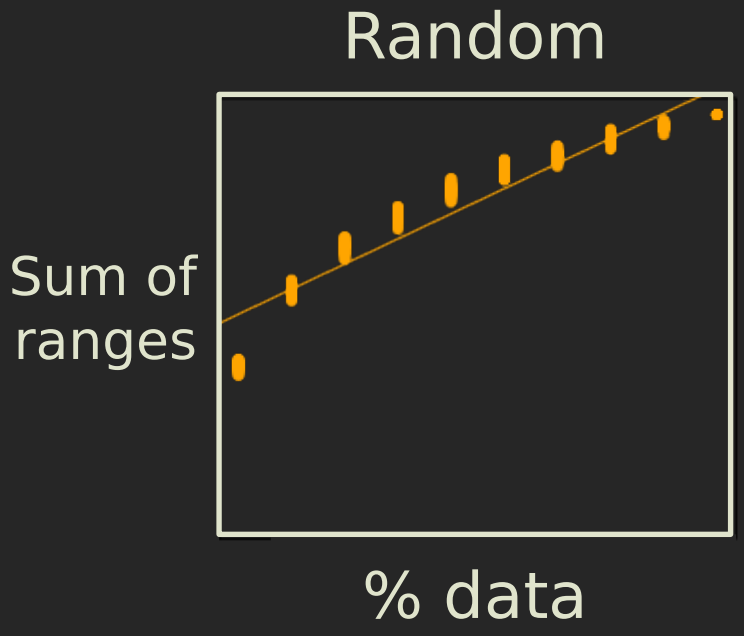

10%
30%
60%
90%
10% - 90%
30% - 70%
60% - 40%
90% - 10%
Random
Sum of ranges
% data
Size
Sum of ranges
% data

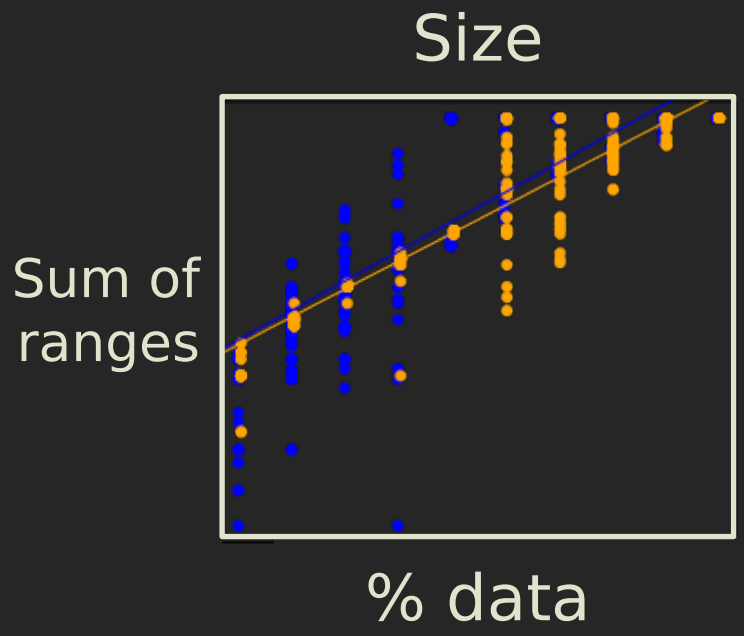

10%
30%
60%
90%
10% - 90%
30% - 70%
60% - 40%
90% - 10%


Random
Sum of ranges
% data


Size
Sum of ranges
% data


10%
30%
60%
90%
10% - 90%
30% - 70%
60% - 40%
90% - 10%


Random
Sum of ranges
% data


Size
Sum of ranges
% data

The Multidimensional nightmare!

vs.

moms: measuring occupancy in multidimensional space

Guillerme et al. *Ecology and Evolution* 2020

github.com/TGuillerme/moms

moms: Measuring Occupancy in Multidimensional Spaces

Guillerme T, Puttick M, Marcy A, and Weisbecker V (2019). Moms: an exploratory tool for multidimensional space analyses. Some journal. doi: some DOI .

USER MANUAL

Multidimensional space parameters

Select the type of space to use:

Input

Select a multidimensional matrix in csv format.

Browse... trait_space_full.csv

Upload complete

Upload your own multidimensional matrix! The matrix must be in .csv format, with numeric values no NAs.

Space modification

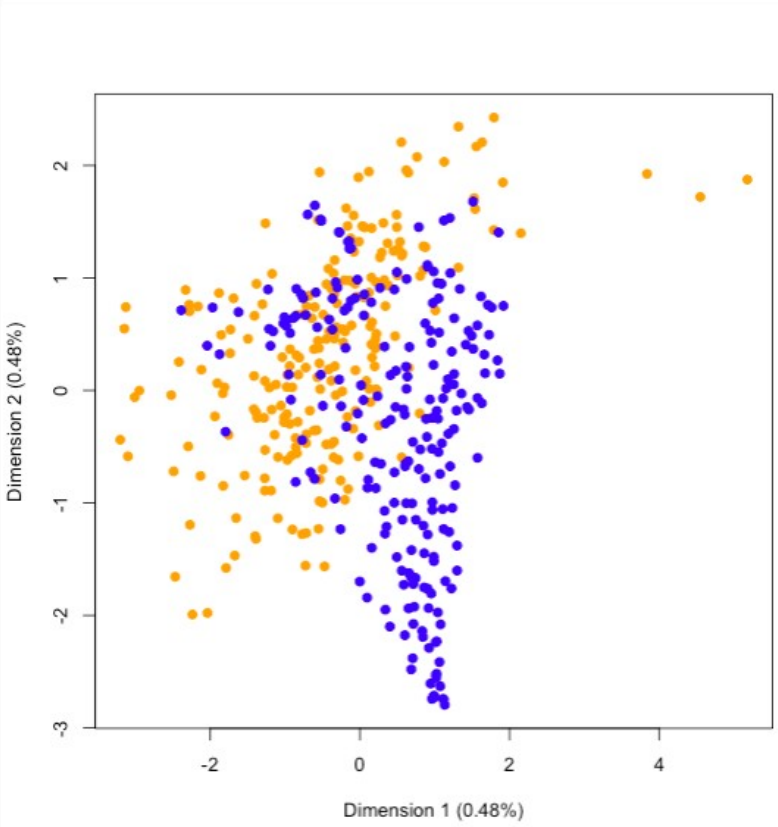
Limit

Proportion to remove:

0.1 0.5 0.9

0.1 0.18 0.26 0.34 0.42 0.5 0.58 0.66 0.74 0.82 0.9

Inverse removal



Multidimensional space occupancy (disparity):

n	Sum of variances	change
443	264.30	
221	259.90	-1.66 %

Space occupancy metric (disparity)

Metric type

Volume

Volume metric

Sum of variances

Show metric code

You can find more informations about the metric types in the dispRity manual .

Display

Horizontal axis

1

Vertical axis

2

Colours

Contrast

Axis with the same scale

Guillerme et al. *Ecology and Evolution* 2020