Why should I trust you?

Member of the basefarm group

Definition 5. An n-dimensional **differentiable manifold** $\mathcal{M}$ is an n-dimensional manifold equipped with a fixed differentiable structure.

It is often useful to regard a manifold as a global object constructed from locally Euclidean pieces.

Remark 2. If $\{\varphi_\alpha : \mathcal{U}_\alpha \to \mathcal{U}'_\alpha : \alpha \in A\}$ is a smooth atlas for a differentiable manifold $\mathcal{M}$, then $\mathcal{M}$ can be reconstructed from the disjoint union of charts as

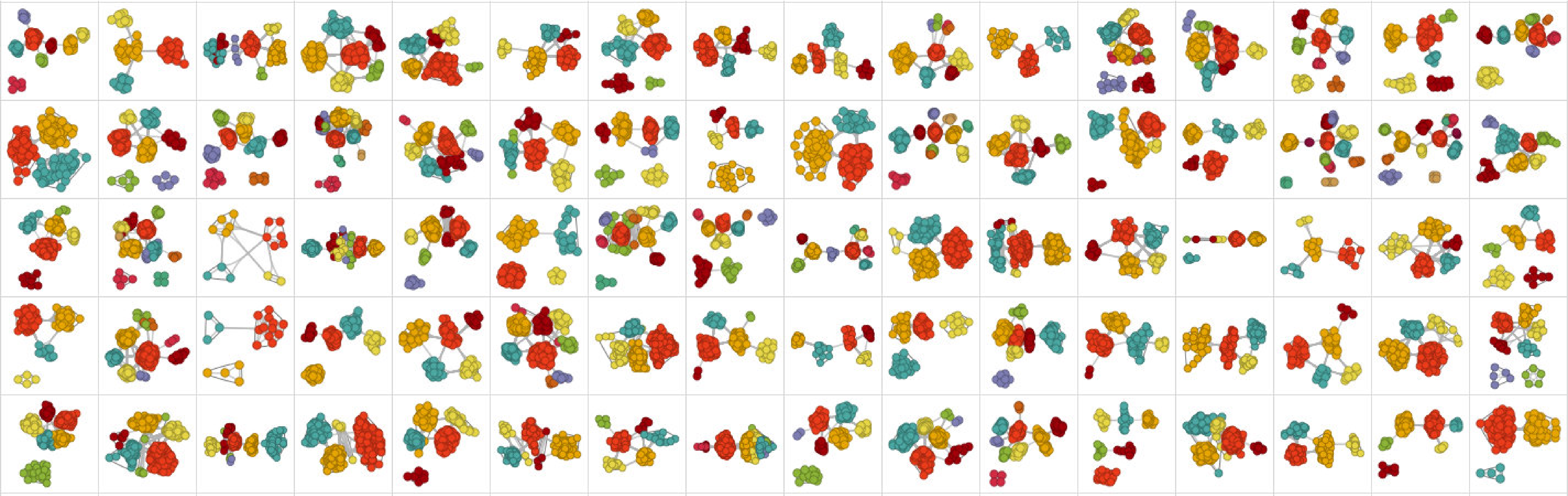
$$\mathcal{M} = \left(\coprod_{\alpha \in A} \mathcal{U}'_\alpha \right) \Big/ \sim$$

where the equivalence relation is

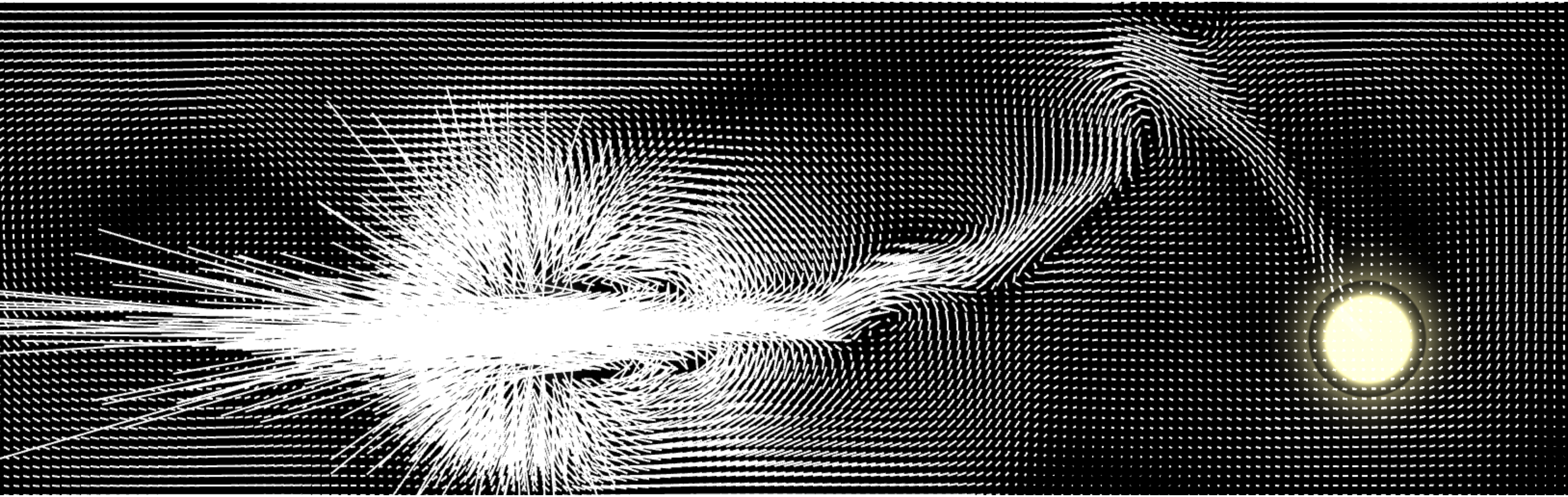
$$\mathcal{U}'_\alpha \ni p \sim q \in \mathcal{U}'_\beta \qquad \text{if and only if} \qquad (\varphi_\beta \circ \varphi_\alpha^{-1})(p) = q.$$

One just needs to check that the resulting space is Hausdorff.

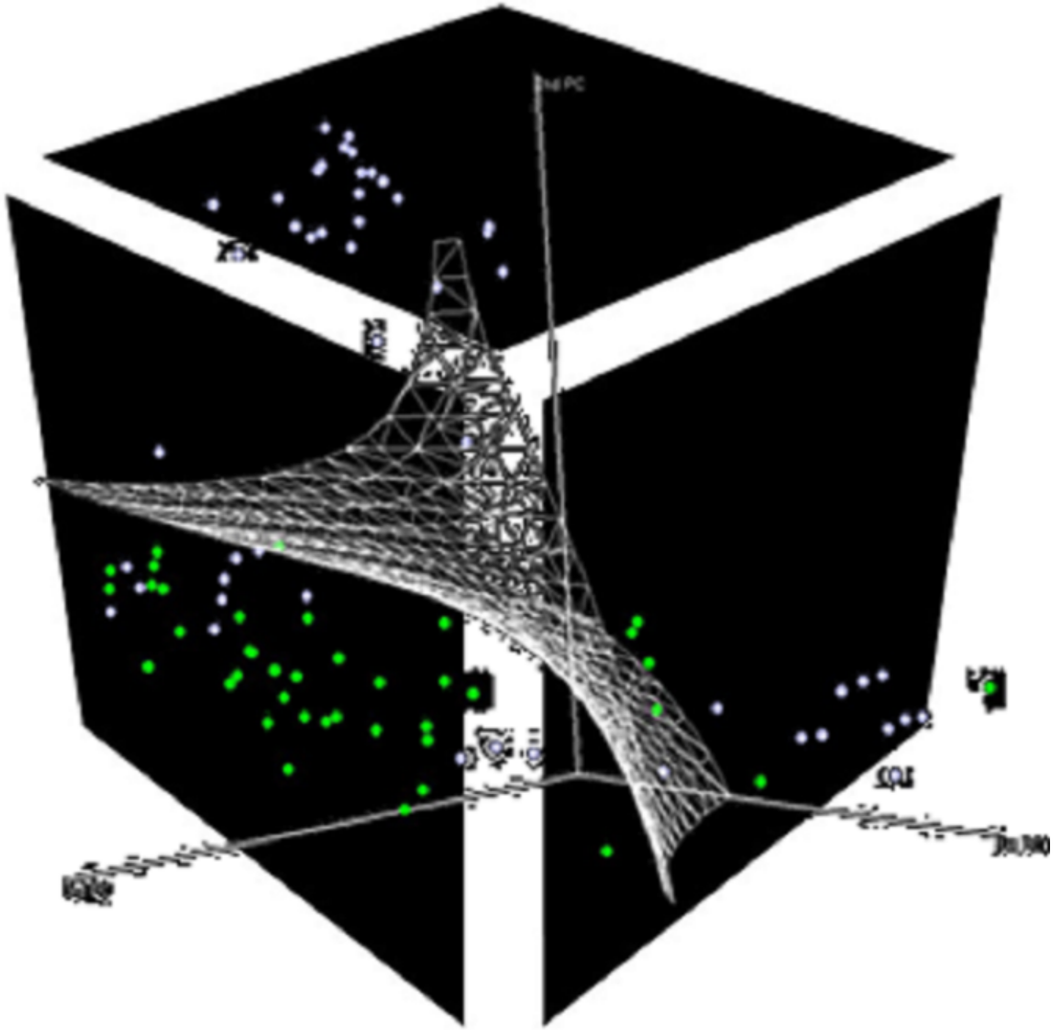
Why should I trust a statistical model?



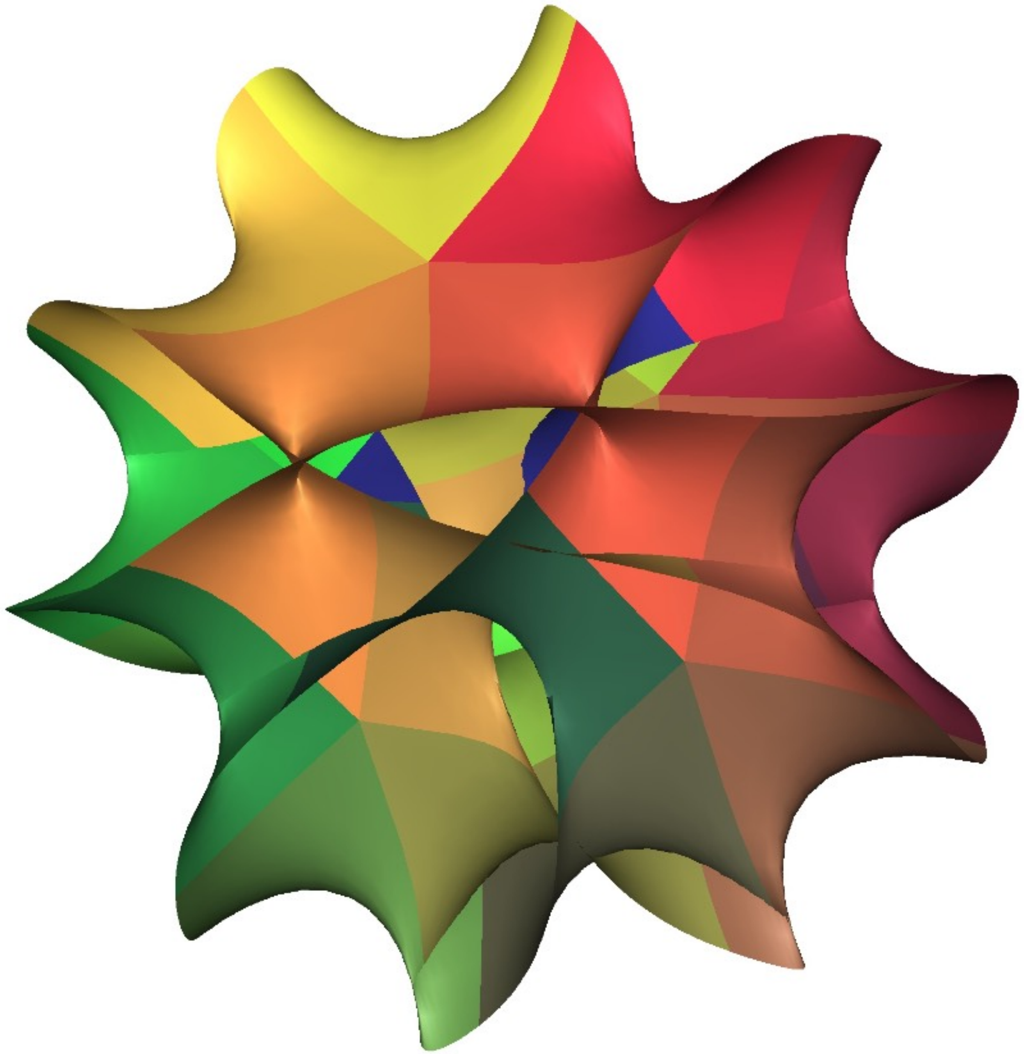
Three waves of AI



Black box AI



Manifolds



White box AI - transparent AI

Local interpretable model-agnostic explanations

From data to rules – and the other way around