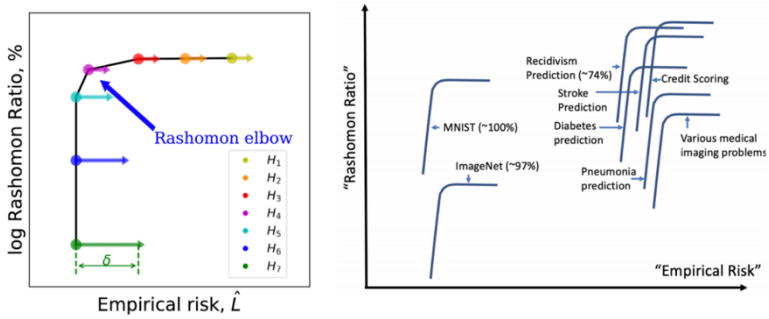
Briefly speaking, The Rashomon in statistical modeling area refers to the situation that there are a lot of f(x) to meet the very similar results, however, involving different types and number of variables. When we have enough data, the amount of f(x) may close to infinite thus necessarily including a perfect and correct one. As far as I am concerned, I don't regard the idea as realistic.

Firstly, it is quite difficult to realize the definite perfection. The most dominant progress that algorithm model has achieved is that it adopted accept the multiplicity of good models, analyzing data from different perspectives at the same time. So the question is the combination of factors taking into consideration. Cynthia Rudin, Professor of Computer Science at Duke University and the Institute of Mathematical Statistics (IMS) Fellow 2019 (also a KDD XAI 2019 panelist) proposed a diagnostic tool, called the "Rashomon Curve". The length of arrow delta is the generalization error. If the ML problem is too complex for a model class considered, only the horizontal part of the Rashomon curve is observed. This is an indication that the model class considered is not complex enough to learn the training data well. On the other hand, if the ML model class considered is too complex for the training data, only the vertical part of the Rashomon curve is observed. The turning point in the Rashomon curve ("Rashomon elbow") is a sweet spot where lower complexity (higher log Rashomon ratio) and higher accuracy (low empirical risk) meet. Thus, among the hierarchy of model classes, those that fall in the vicinity of the Rashomon elbow are likely to have the right level of complexity for achieving the best balance of high accuracy with desired properties such as generalizability and interpretability. In my opinion, if we treat all restricted conditions as a kind of unique variable, they are not continuous, in other word, there are space between each two of them, just like there is gap between 1 and 10. So if the turning point appears exactly at the tiny space, the perfect one then doesn't exist. We can only find neighboring solutions to infinitely approach the one we try to find out. It may better to express my standpoint like this: I don't completely deny the realization of Rashomon set, but it isn't that general for special conditions.



Secondly, it may cost much to apply the Rashomon set into realistic use to meaningfully capture explainable models. The Rashomon way request assessment to such a large amount of possible models, moreover, comparison among them and between the model and truth. It is a challenge to

propose equal standard to test them. There are still many barriers to be overcome before systematically application.

Sorry for answer the question without much understanding and scientific basis because I didn't well reserve enough time for this.

References:

[1] https://towardsdatascience.com/navigating-the-sea-of-explainability-649672aa7bdd

[2] Breiman, L. (2001). Statistical Modeling: The Two Cultures (with comments and a rejoinder by the author). Statistical Science, 16(3), 199–231. doi:10.1214/ss/1009213726