**Hyperparamter tuning**

There are many hyperparameters to tune. For example, the learning rate, the momentum term , number of hidden units and the mini\_batch size are all very important parameters. How to choose which one to give prominence to ?

In the olden days, they used to place random values in a grid (this must be what gridsearchCV is)

Chart, scatter chart

Description automatically generated

In deep learning the good practice is to not put them in a grid but put random values

Calendar, scatter chart

Description automatically generated

There are multiple values to which you would have checked the model performance for and this is a good practice. When the number of dimensions increase and you use the random method there are even more number of values which you would have tried.

You have to set the appropriate scale with which the hyperparameters are picked. Sampling at random for the hyperaparameters with low value is not a good thing. So, we need to change the scale in which we check the values. One way is to use the logarithmic scale. Basically sampling on a linear scale is not the only way to sample for all the scenarios.

Hyperparameter tuning.