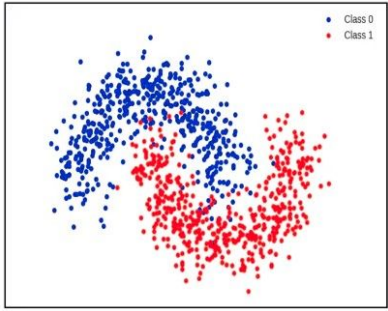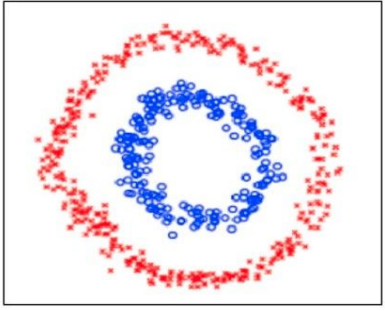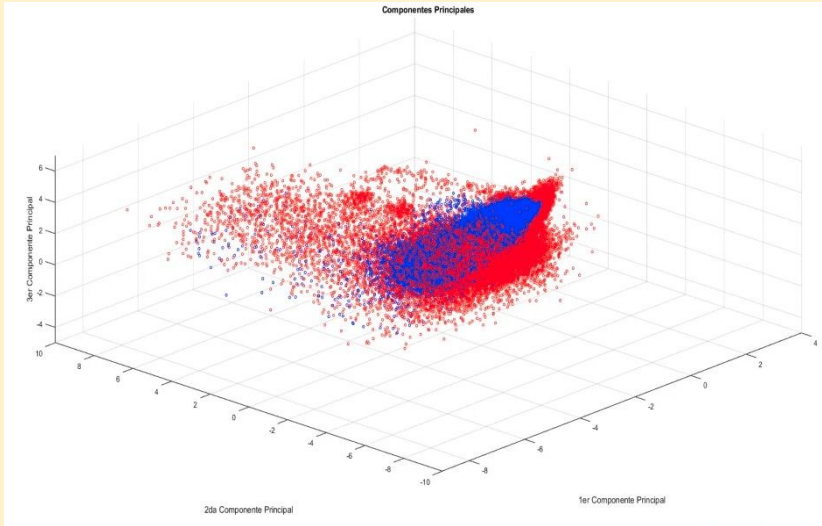## How do you choose the right Network Configuration
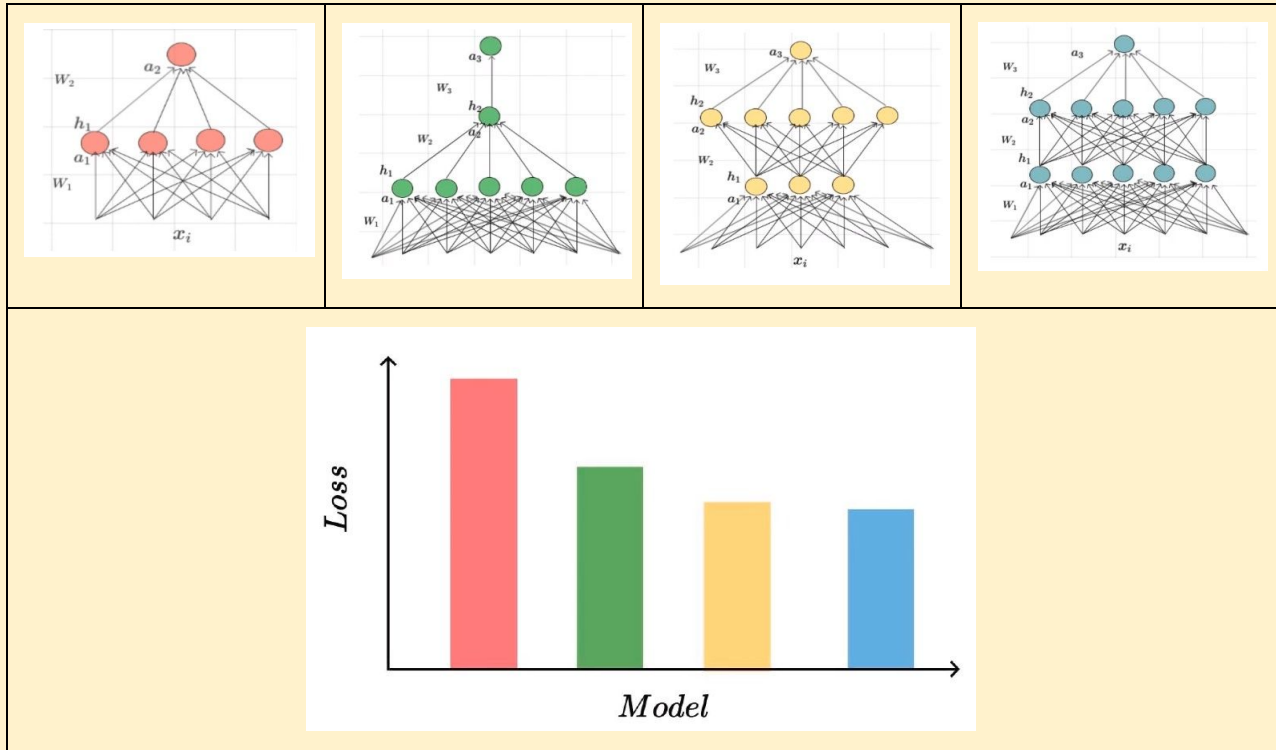In practice how would you deal with extreme non-linearity

1. Consider the following datasets, 2D and 3D

Dimension	Data
2D	
3D	

2. Up to 3D, we can visualise our data to check if it is linearly-separable or not.
3. However, in real-life scenarios, datasets often approach 1000-10000 dimensions, so there is no way to visualise the data to ascertain non-linearity.
4. In order to choose the best configuration for our neural network, we need to try out different combinations and select the one with the lowest loss

5. Here are some sample configurations and their corresponding losses

6. From the above figures, it is evident that the fourth yields the lowest loss.
7. This process of tuning the DNN i.e. The No. of layers, No. of neurons in each layer, learning rate, batch size etc are together called **Hyperparameter Tuning**