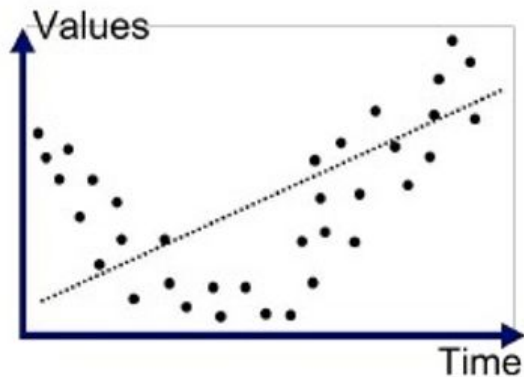


Deep Learning for NLP - Focus on Medical Applications

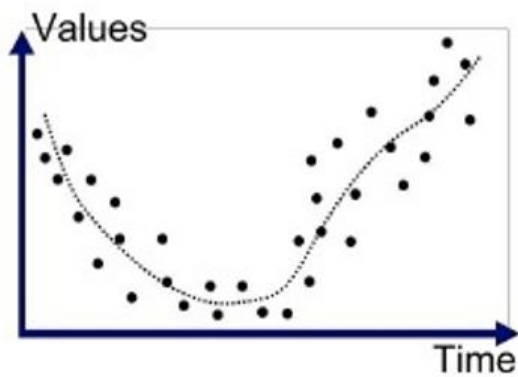
Overfitting and Dropout

Overfitting

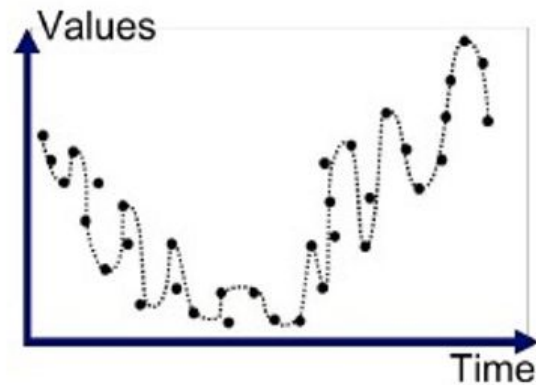
- When our model is too complex for our data



Underfitted



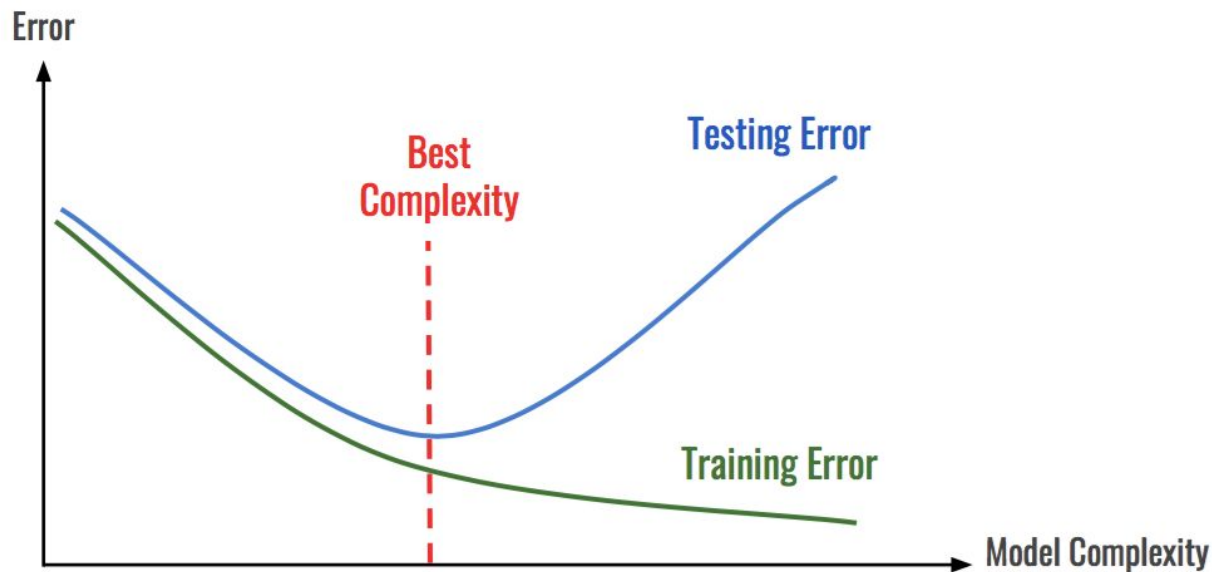
Good Fit/Robust



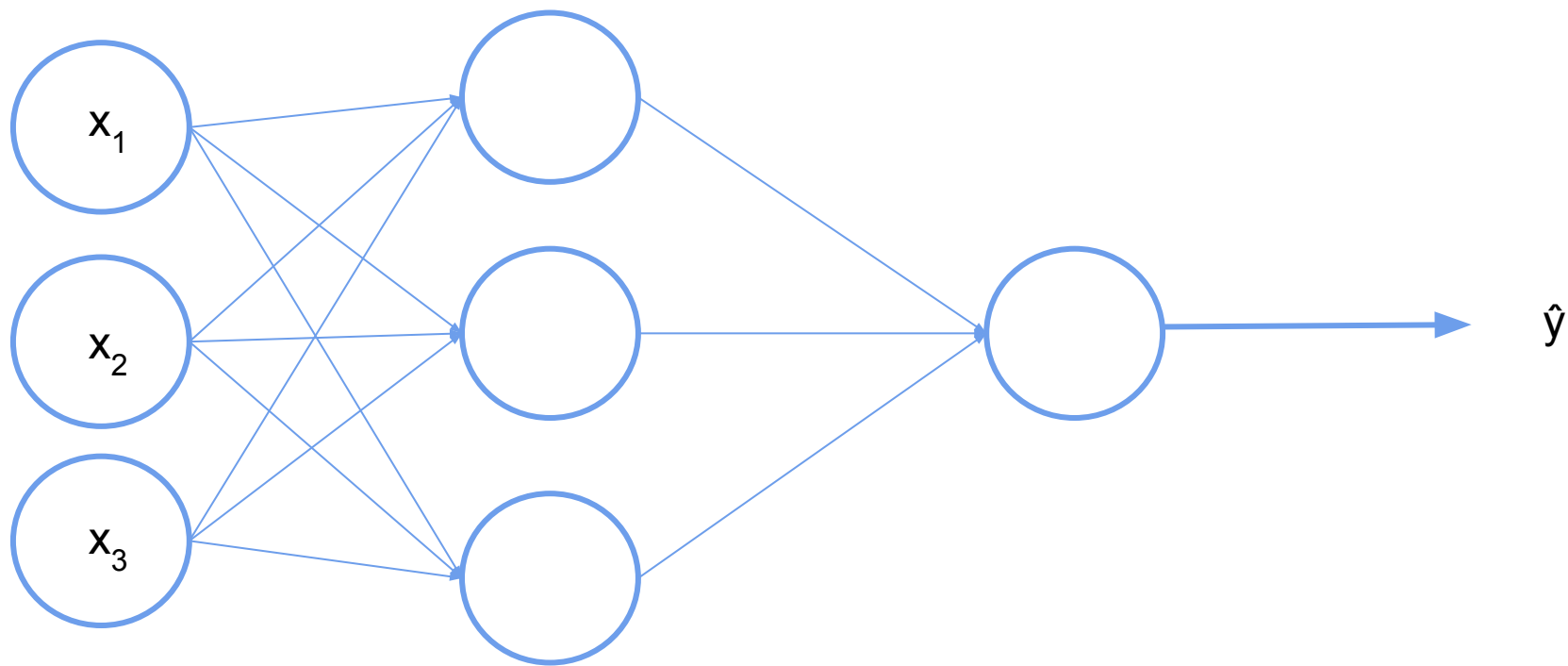
Overfitted

Overfitting

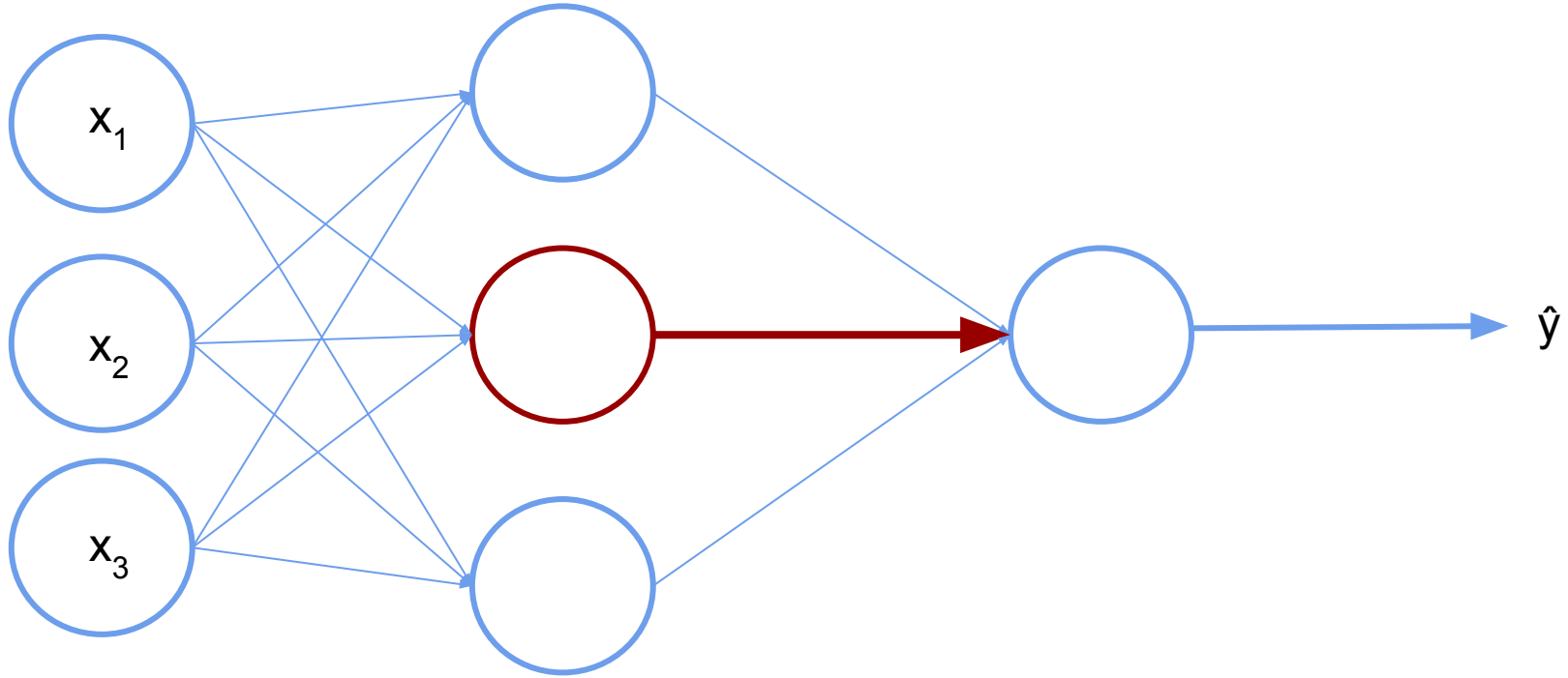
- Relation between model complexity vs Test error vs Train error



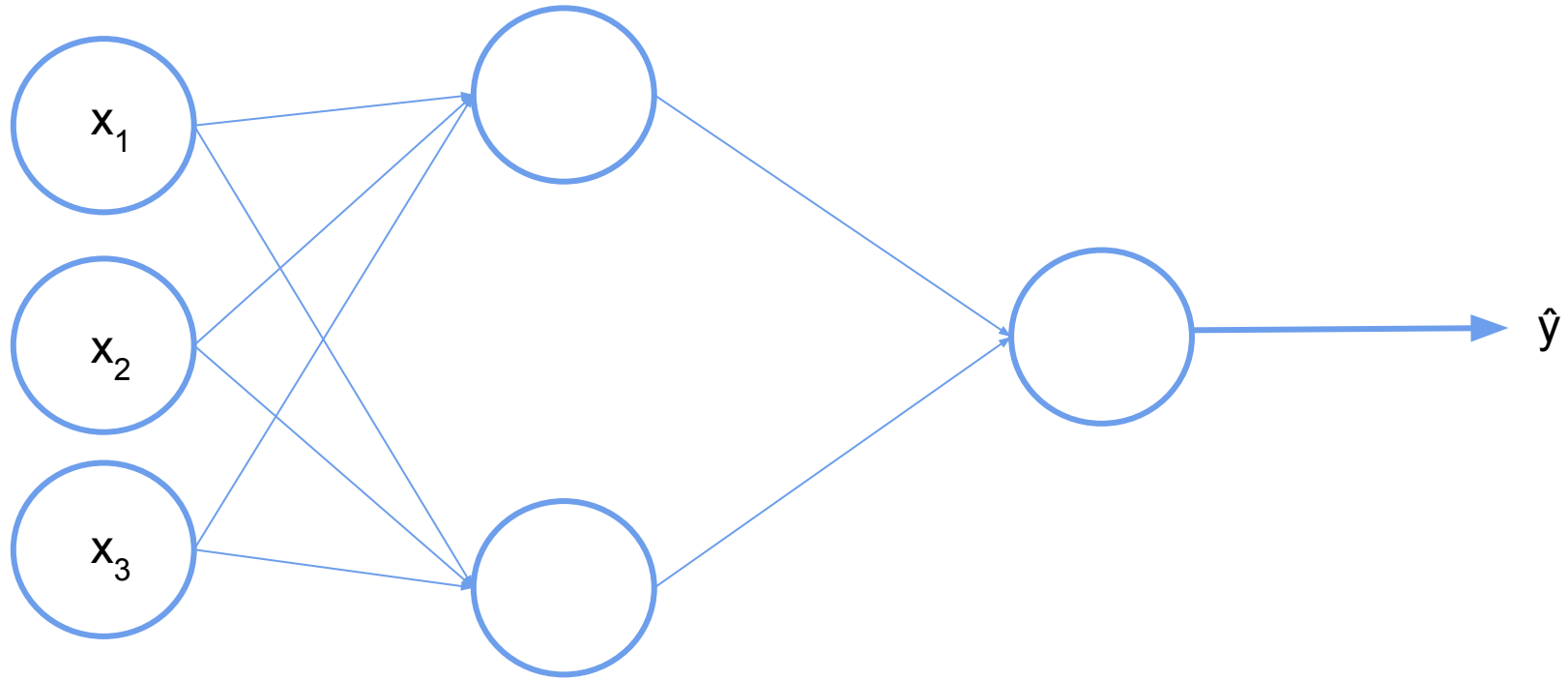
Overfitting in Neural Networks



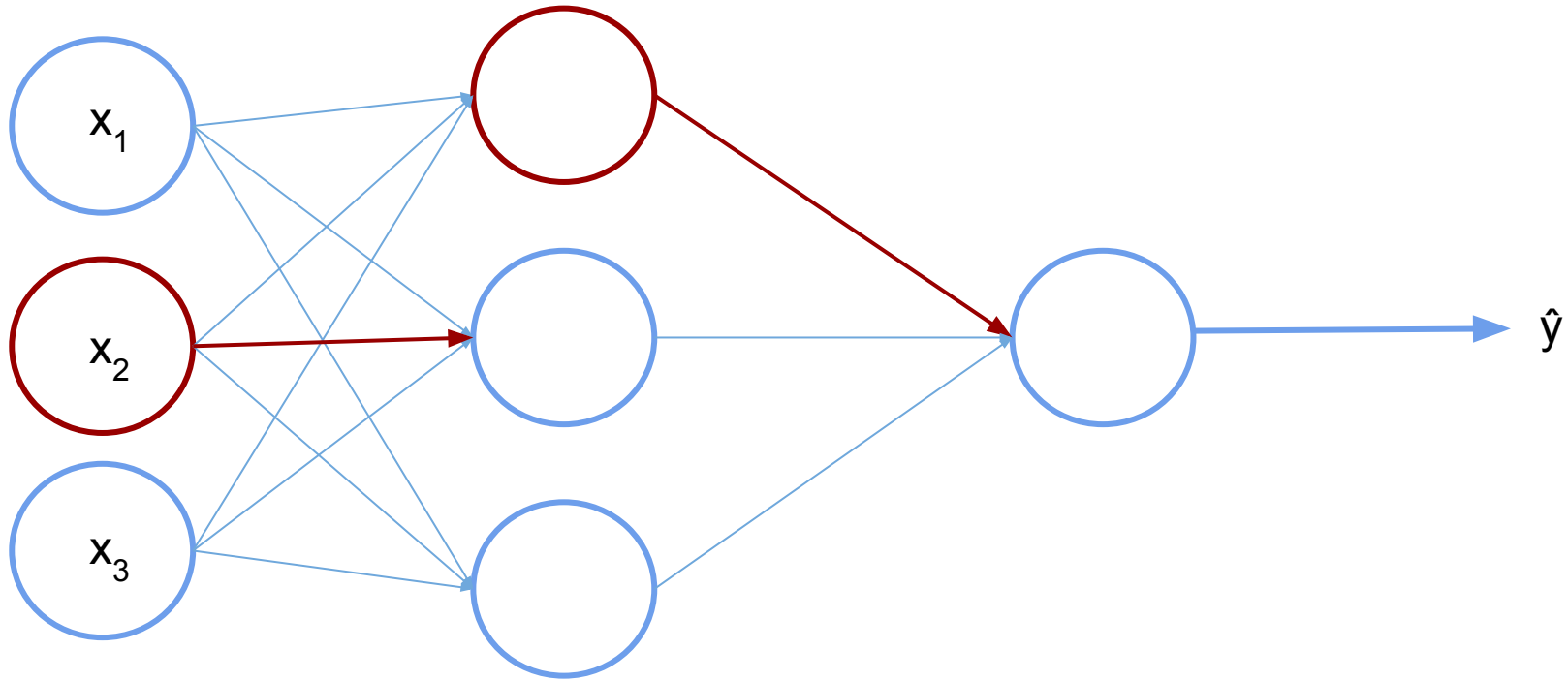
Overfitting in Neural Networks - Disable Neurons - Dropout



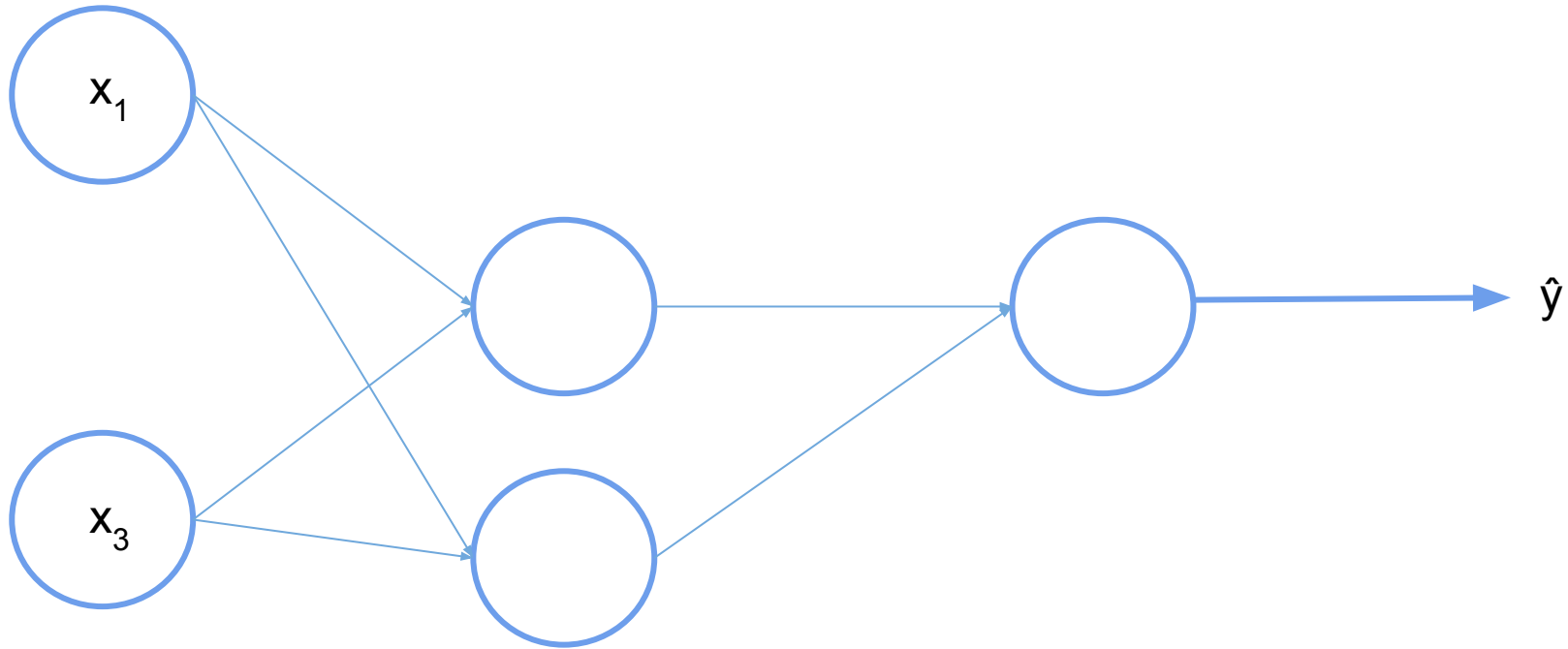
Overfitting in Neural Networks - Disable Neurons - Dropout



Overfitting in Neural Networks - Disable Neurons - Dropout (input risky)



Overfitting in Neural Networks - Disable Neurons - Dropout



Overfitting in Neural Networks - Disable Neurons - Dropout

- By doing this we don't allow the neurons to overfit (learn exactly the training data)
 - We also force the network to learn using all neurons
 - It can be seen as ensembling
-
- This is one way to handle overfitting - there are many more that we will explore in the future