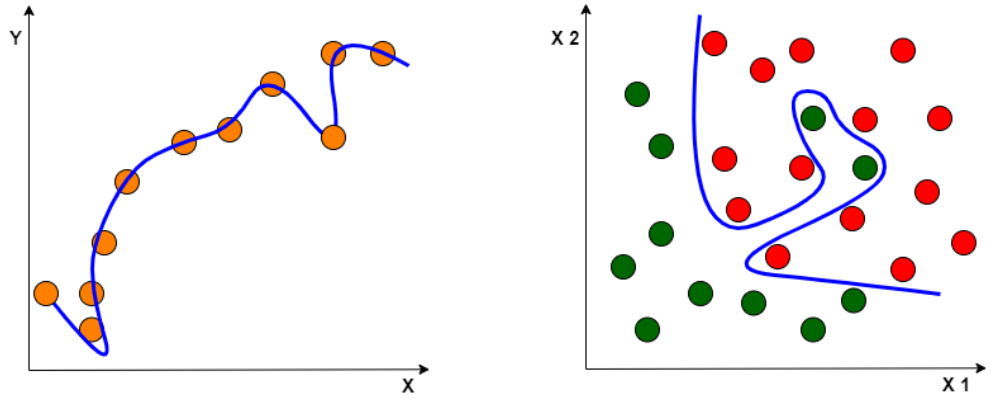
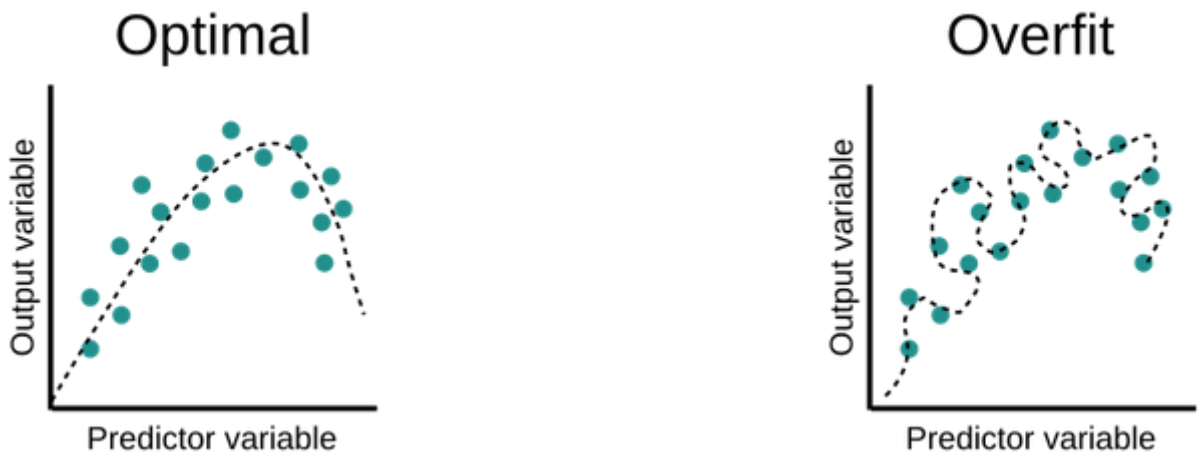
Siddhardhan

Overfitting in Machine Learning



Overfitting

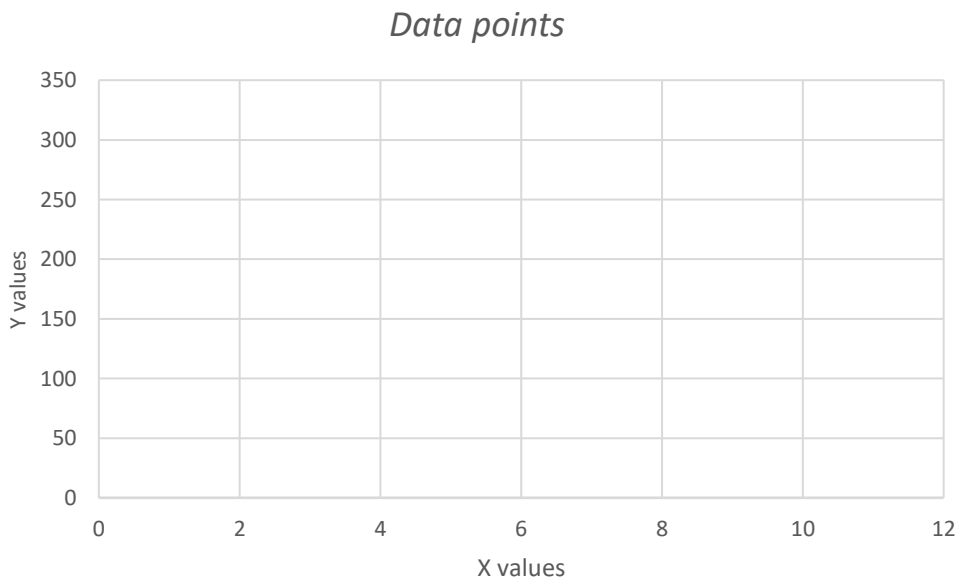
Overfitting refers to a model that models the training data too well. Overfitting happens when a model learns the detail and noise in the training dataset to the extent that it negatively impacts the performance of the model.



Sign that the model has Overfitted : High Training data Accuracy & very low Test data Accuracy

Overfitting

X	1	2	3	4	5	6	7	8	9	10
Y	1.38	101.41	23.34	39.89	55.23	129.91	119.33	221.09	207.43	287.80



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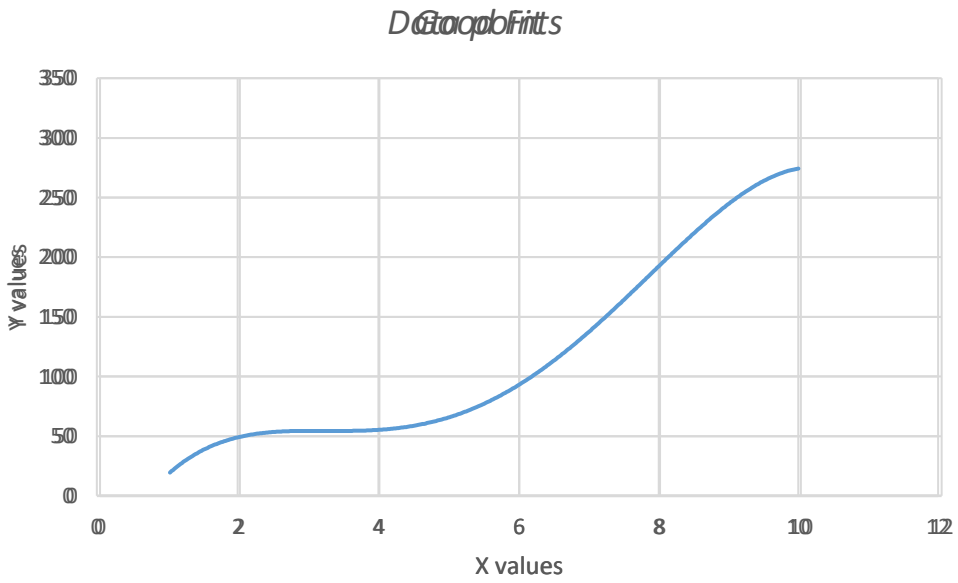

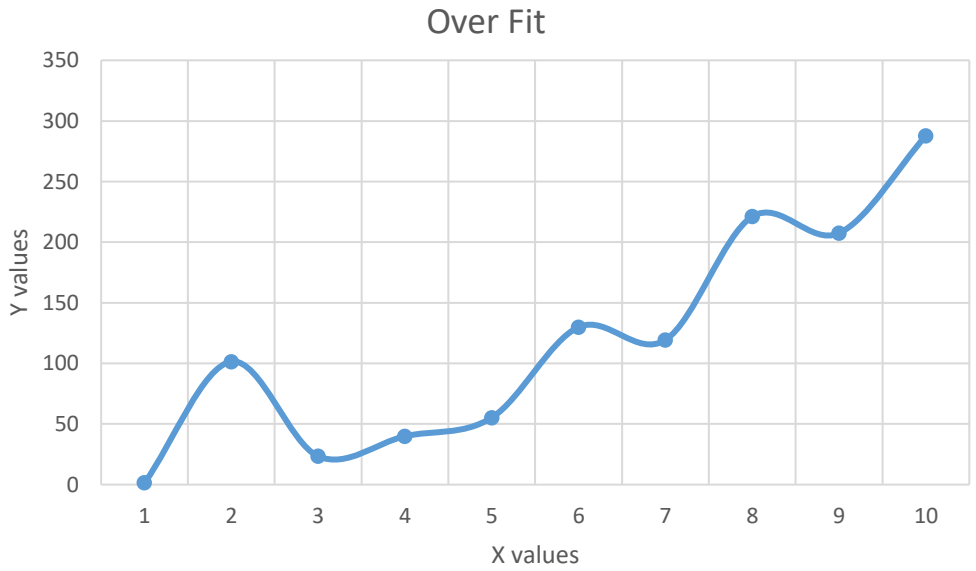

Overfitting

Causes for Overfitting:

1. Less Data
2. Increased Complexity of the model
3. More number of layers in Neural Network

Preventing Overfitting by:

1. Using more data
2. Reduce the number of layers in the Neural network
3. Early Stopping
4. Bias – Variance Tradeoff
5. Use Dropouts