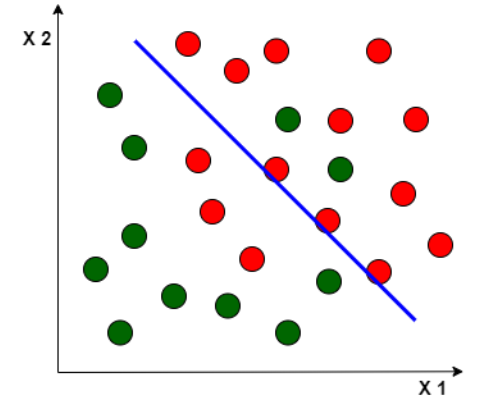
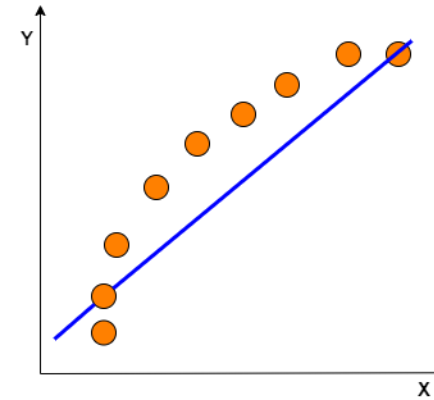


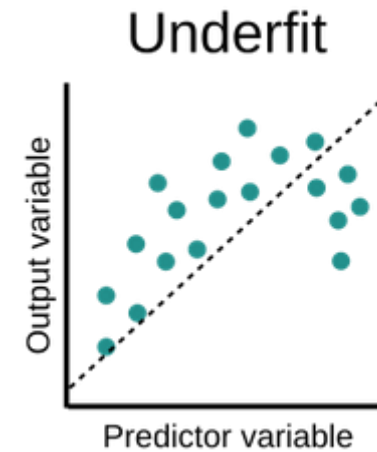
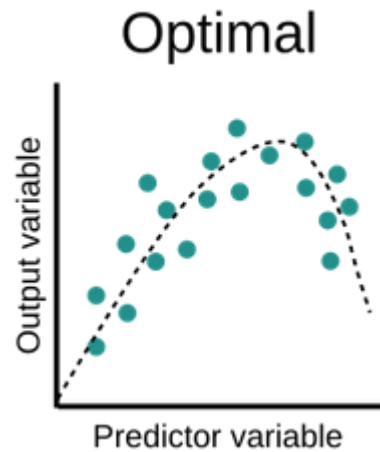
Siddhardhan

# Underfitting in Machine Learning



# Underfitting

**Underfitting** happens when the model **does not learn enough** from the data. Underfitting occurs when a machine learning model cannot capture the underlying trend of the data

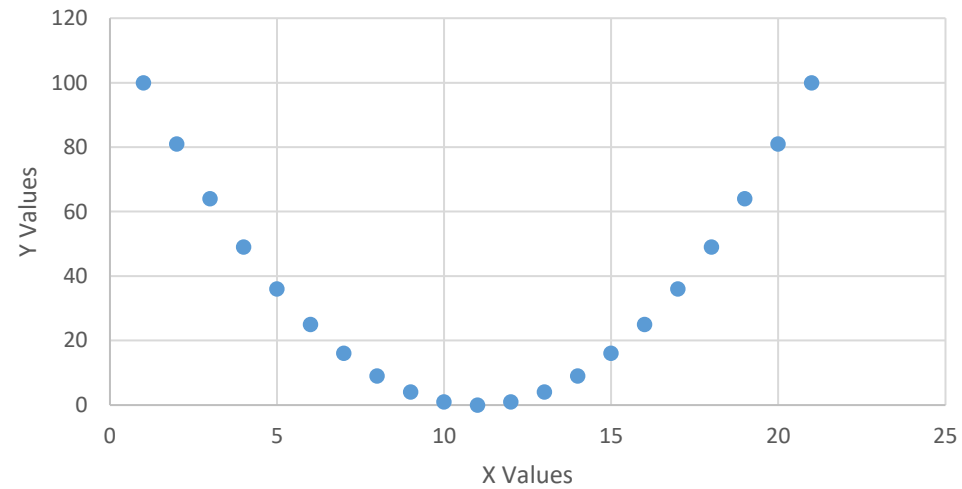


**Sign that the model has Underfitted** : Very Low Training data Accuracy

# Underfitting

X	-10	-9	-8	-7	.....	0	.....	7	8	9	10
Y	100	81	64	49	.....	0	.....	49	64	81	100

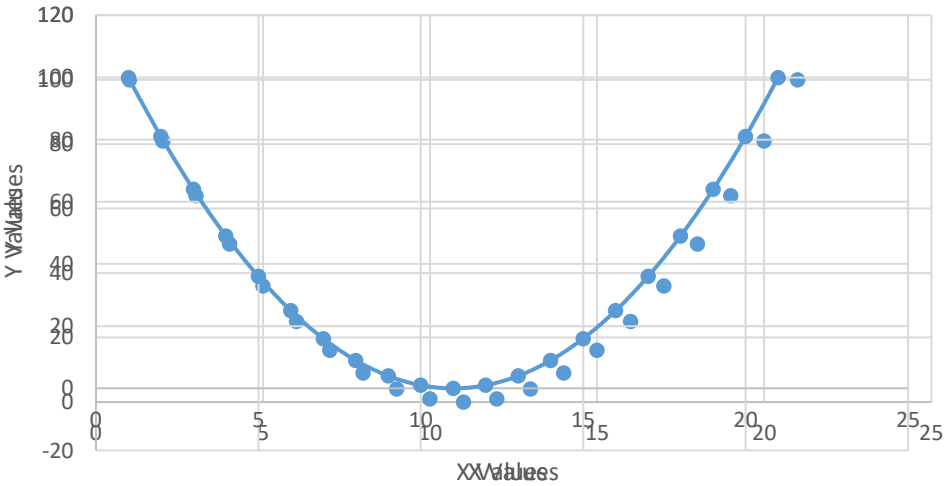
*Data Points*



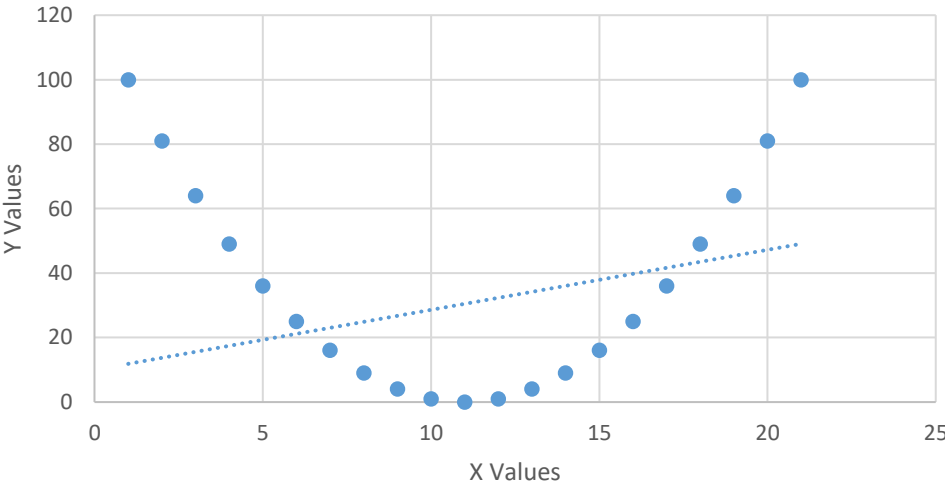
# Underfitting

X	-10	-9	-8	-7	.....	0	.....	7	8	9	10
Y	100	81	64	49	.....	0	.....	49	64	81	100

Good Fit



Under Fit



# *Underfitting*

## Causes for Underfitting:

1. Choosing a wrong model
2. Less complexity of the model
3. Less variance but high bias

## Prevent Underfitting by:

1. Choosing the correct model appropriate for the problem
2. Increasing the complexity of the model
3. More number of parameters to the model
4. Bias – Variance Tradeoff