Predictive Modeling

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Linear Regression

Topics to be covered

1. What is Linear Regression?
2. Cost Function
3. Gradient Descent
4. R-squared
5. Evaluation Metrics for Linear Regression

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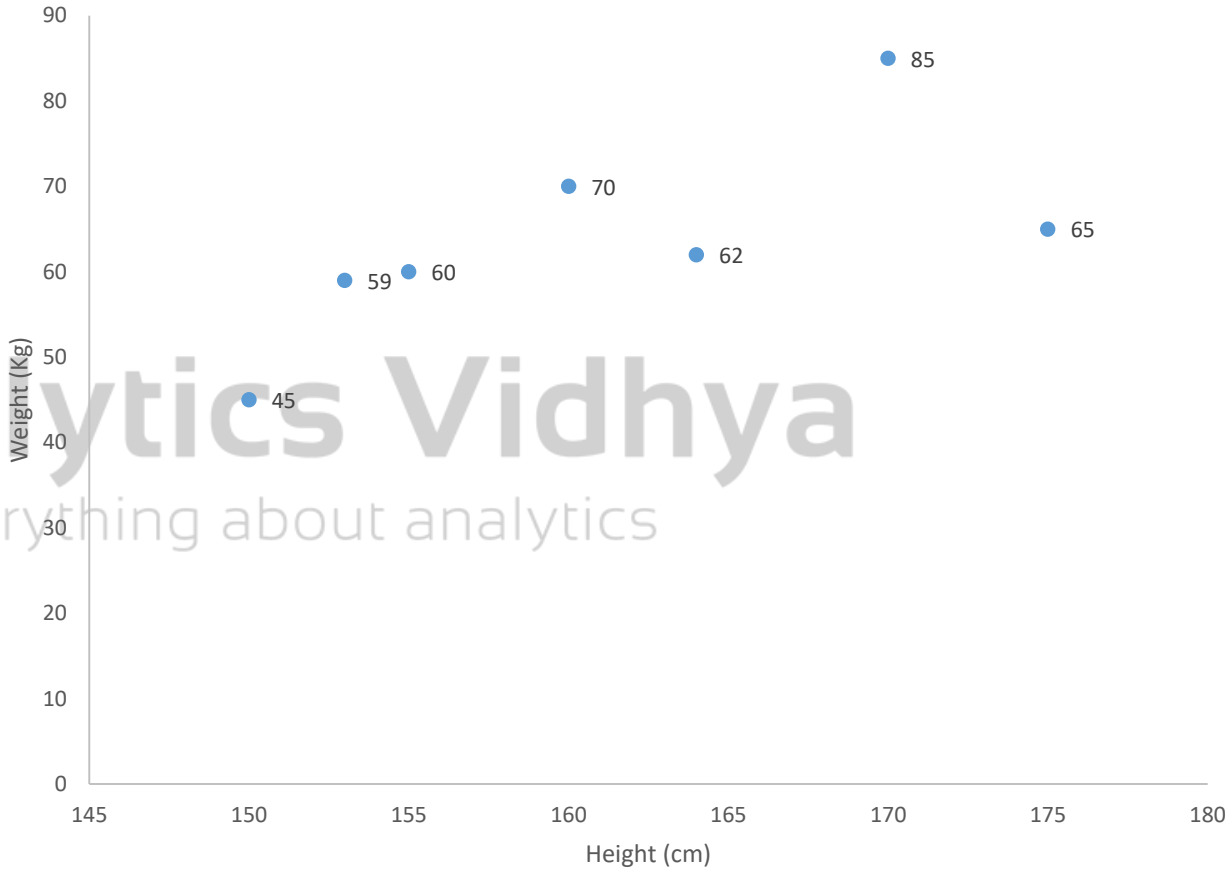
What is Linear Regression?



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Height(cm)	Weight(kg)
150	45
155	60
175	65
160	70
153	59
164	62
170	85

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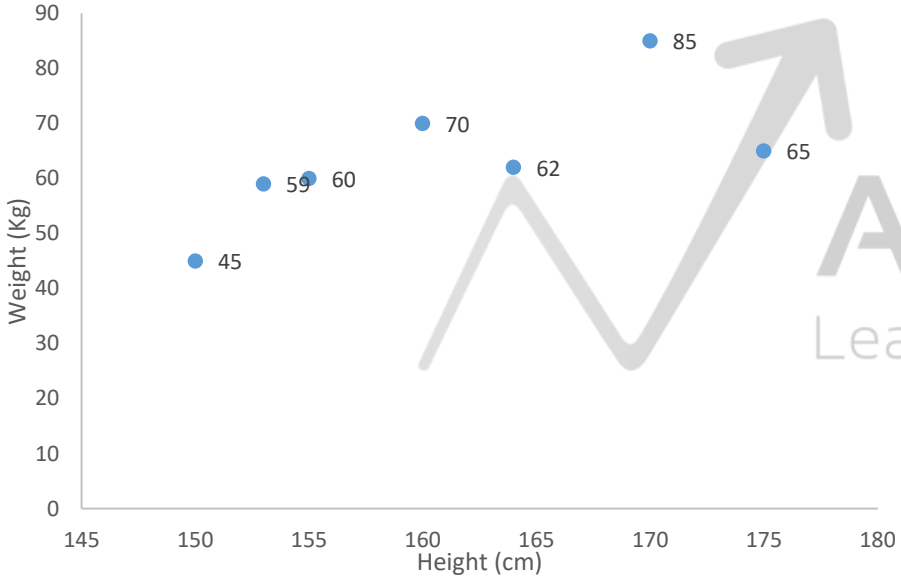
Cost function



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Gradient Descent

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R-Squared

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R-Squared

$$r^2 = \frac{\sum (\hat{y} - \bar{y})^2}{\sum (y - \bar{y})^2} = \frac{SSR}{SST}$$

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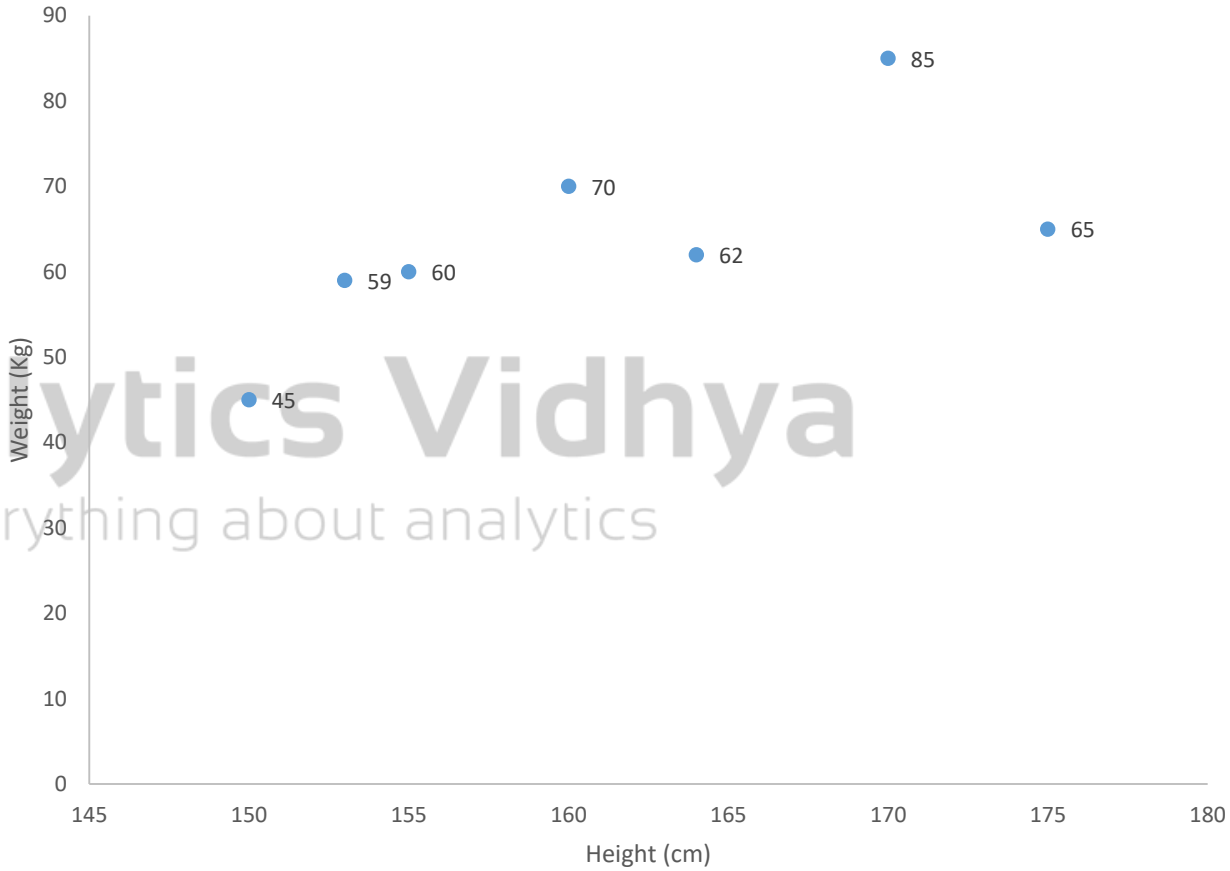
Evaluation Metrics

RMSE (Root Mean Square Error)



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Thank You

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