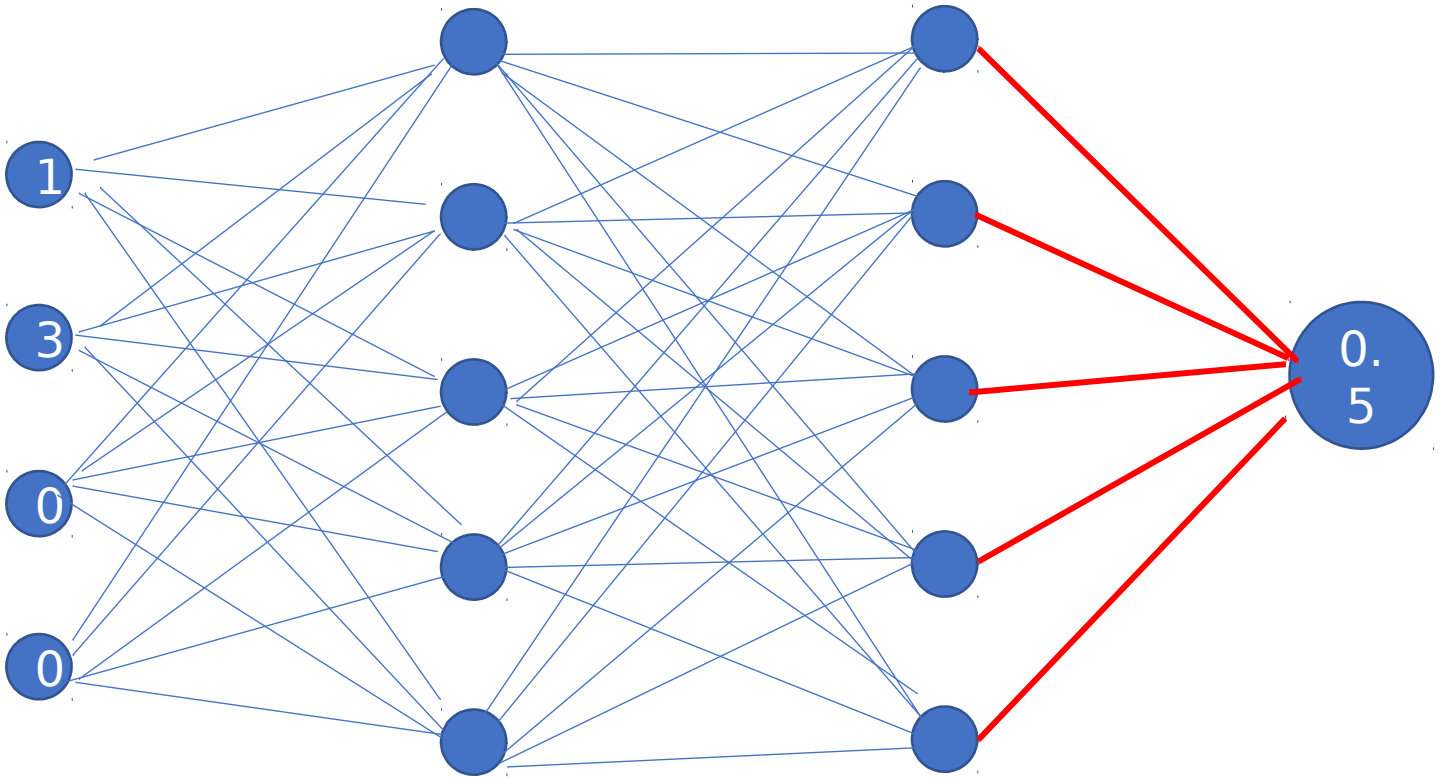
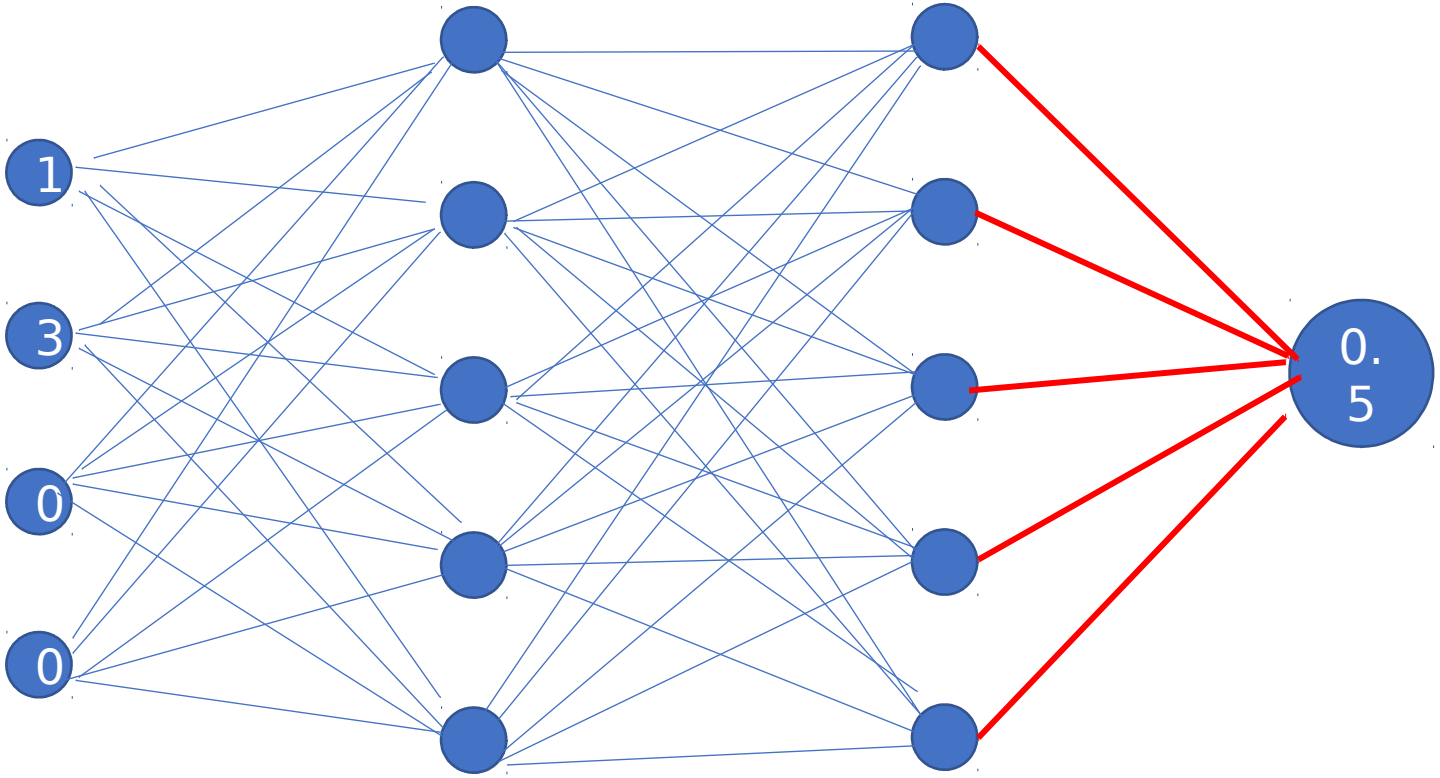
Error and Reason for Error

Actual vs Predicted



Actual	Predicted
0	0.5

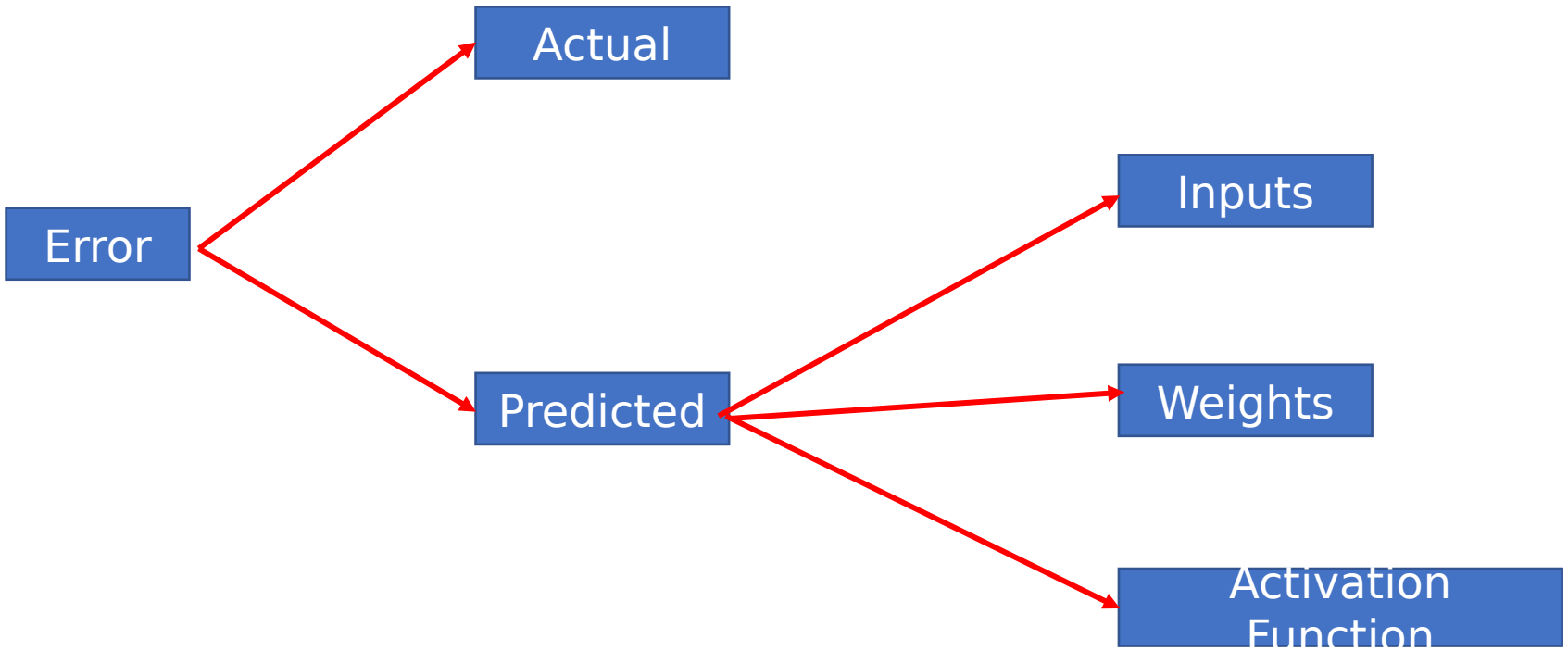
Error



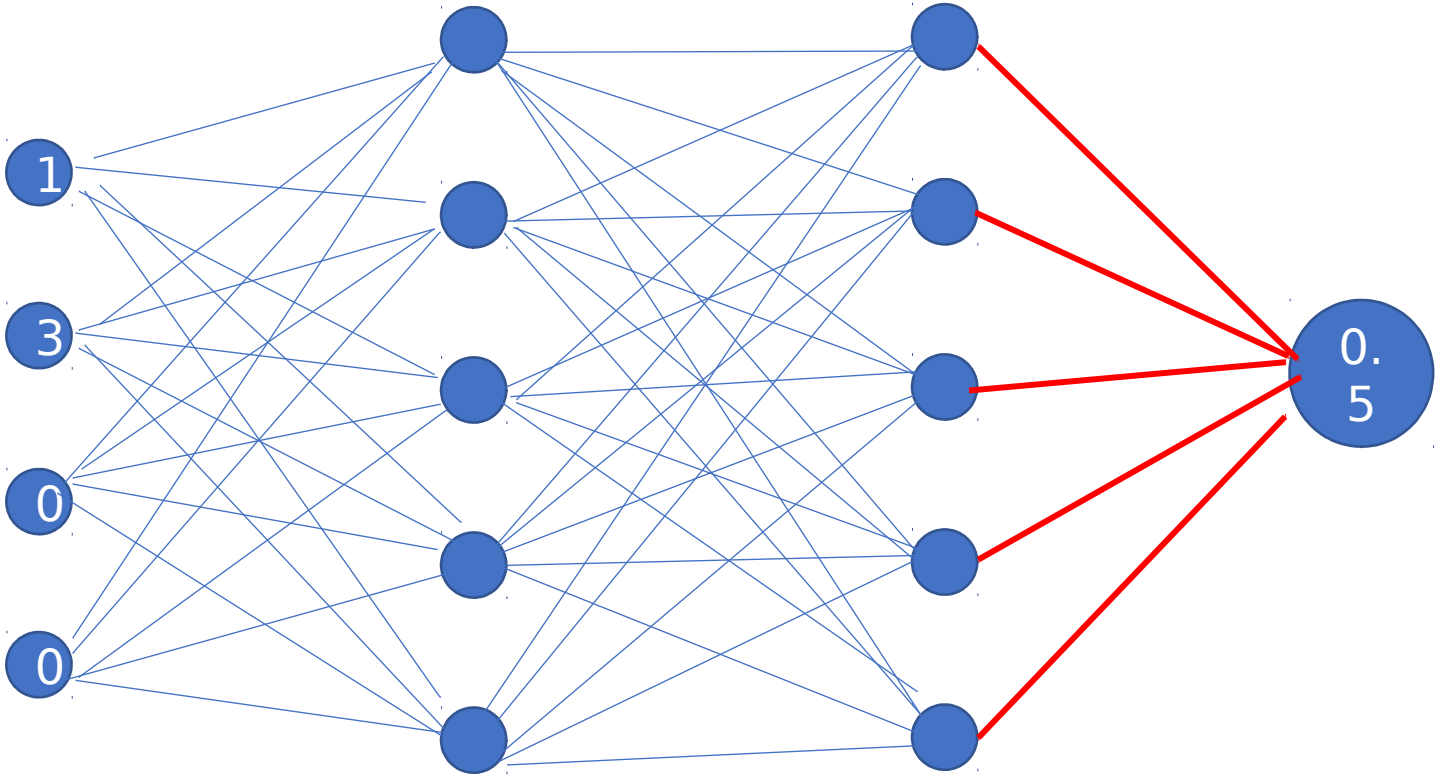
Actual	Predicted	Error
0	0.5	0.125

$$Error = \frac{(Y - \hat{Y})^2}{2}$$

What can be changed to Reduce Error?



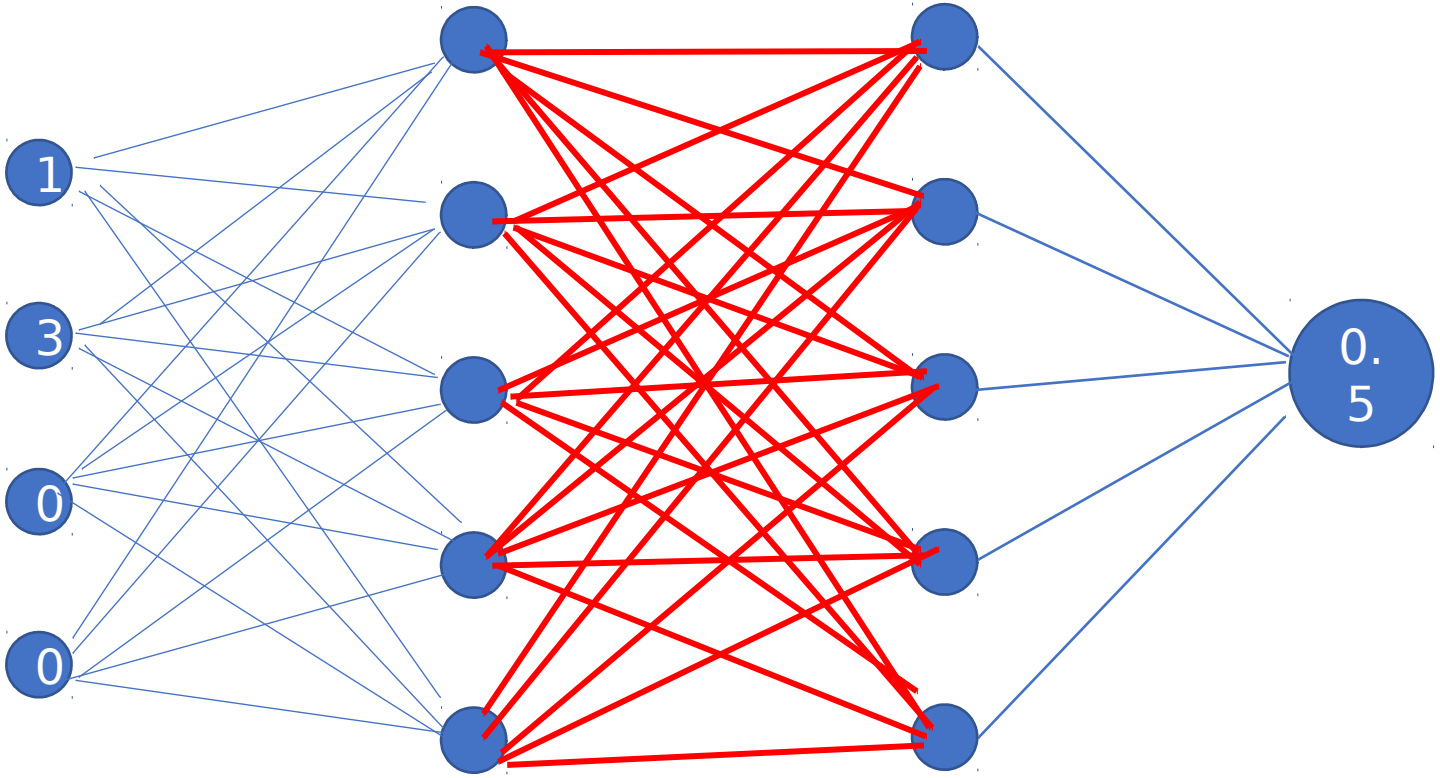
Reason for Error – Incorrect weights at layers



Actual	Predicted	Error
0	0.5	0.125

$$Error = \frac{(Y - \hat{Y})^2}{2}$$

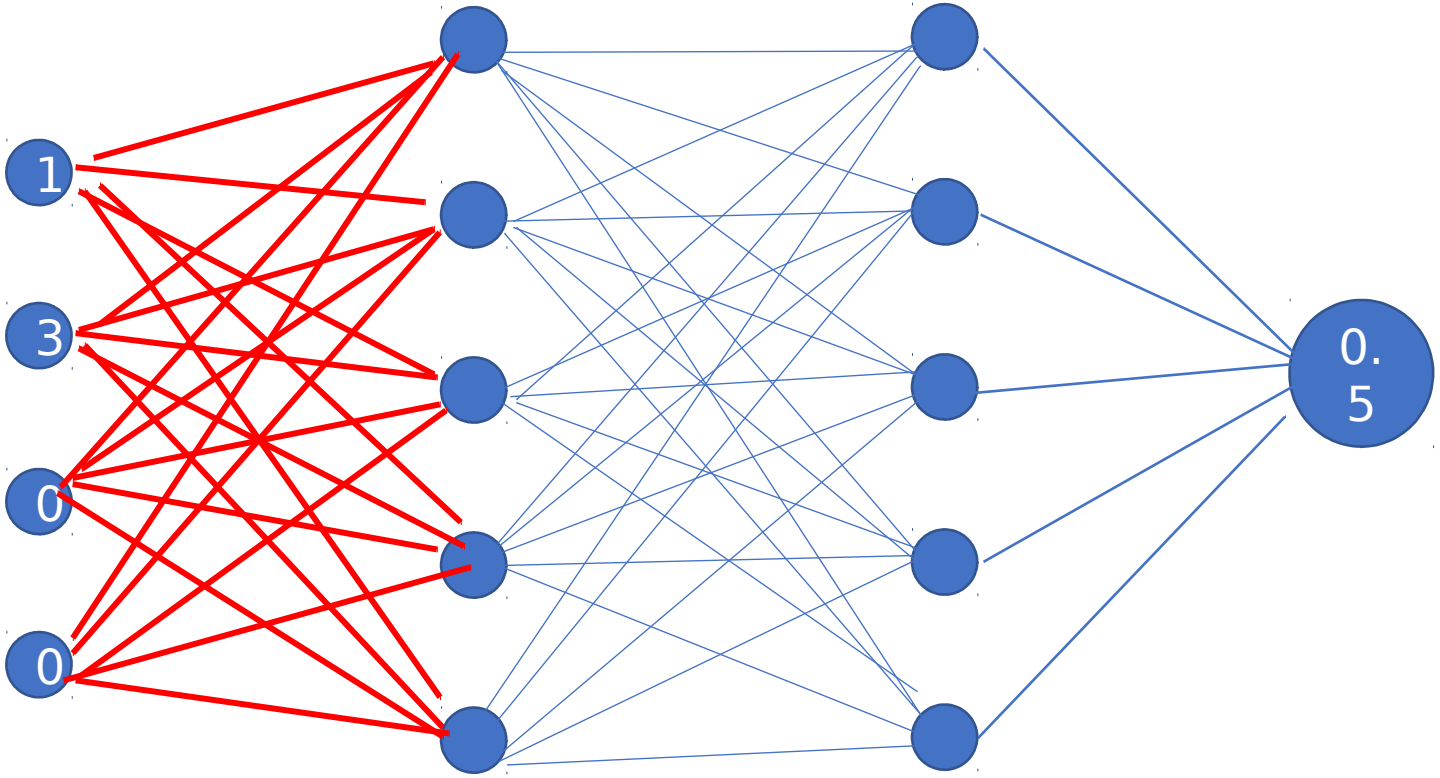
Reason for Error – Incorrect weights at layers



Actual	Predicted	Error
0	0.5	0.125

$$Error = \frac{(Y - \hat{Y})^2}{2}$$

Reason for Error – Incorrect weights at layers



Actual	Predicted	Error
0	0.5	0.125

$$Error = \frac{(Y - \hat{Y})^2}{2}$$

How to Reduce Error?

Change in Error on changing a Weight by a small amount

Direction of Change

Leads to Gradient Descent

Thank You