**Assignment 3**

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Part 2

**4.** Analyze the performance of the network model from Q2 and the network model from Q3. Which network shows a better performance?

Ans: The model in Q2 is trained only for one repetition, or the wrights were updated only once whereas for Q3 the model was trained for 100 repetitions and with each repetition the model’s performance kept getting better.

From the below graphs we can see how the neural network’s performance increased. Since we only had a single repetition for improvement we have only two SSE to plot on the graph. And it did increased the performance of neural network. But in second case, since we updated the weights 100 times the performance got better with each iteration and that is evident from the graph. So, definitely the neural network in Q3 performed better.

This is also evident from the fact that the final SSE in first case is 0.33 but it’s close 0.002 which is much better than the first case.

A graph with a line

Description automatically generated

A graph with a blue line

Description automatically generated