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WES-237B
9/14/2022

Lab 5

Accuracy of AND gate:

100%

Time:

real 0m6.733s

user 0m3.116s

sys 0m2.456s

Accuracy of XNOR gate:

100%

Time:

real 0m6.637s

user 0m3.000s

sys 0m2.540s

The results of the two gates are very similar. I have noticed in some runs the accuracy ends at 75%, however in the majority of cases it reaches 100%.

AND gate results:

Cost : 0.011354

Total number of epochs : 4999

Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.003559 (0.000000) - 0.000000

Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.107266 (0.000000) - 0.000000

Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.108742 (0.000000) - 0.000000

Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.851484 (1.000000) - 1.000000

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Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.108742 (0.000000) - 0.000000

Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.851484 (1.000000) - 1.000000

Accuracy: 1

XNOR gate results:

Cost : 0.130627

Total number of epochs : 4999

Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.580609 (1.000000) - 1.000000

Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.291561 (0.000000) - 0.000000

Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.464679 (0.000000) - 0.000000

Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.786931 (1.000000) - 1.000000

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Data : [1.000000, 0.000000] / Pred (pred) - Real : 0.291561 (0.000000) - 0.000000

Data : [0.000000, 1.000000] / Pred (pred) - Real : 0.464679 (0.000000) - 0.000000

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Data : [0.000000, 0.000000] / Pred (pred) - Real : 0.580609 (1.000000) - 1.000000

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Data : [1.000000, 1.000000] / Pred (pred) - Real : 0.786931 (1.000000) - 1.000000

Accuracy: 1