

| # | NN Controller | | | Setting | Verification Result | | Time (Seconds) | | | Efficiency |
|---|---------------|---|-----|---------|---------------------|-------------|----------------|----------|-------------|--------------|
| | Act | l | n | ε | Before KD | After KD[2] | ReachNN [1] | ReachNN* | After KD[2] | improvements |
| 1 | ReLU | 3 | 20 | 0.001 | Yes(35) | – | 3184 | 26 | – | 112 × |
| | sigmoid | 3 | 20 | 0.005 | Yes(35) | – | 779 | 76 | – | 10 × |
| | tanh | 3 | 20 | 0.005 | Unknown(35) | Yes(35) | 543 | 81 | 76 | 7 × |
| | ReLU+tanh | 3 | 20 | 0.005 | Yes(35) | – | 589 | 76 | – | 7 × |
| 2 | ReLU | 3 | 20 | 0.01 | Yes(9) | – | 128 | 5 | – | 25 × |
| | sigmoid | 3 | 20 | 0.001 | Yes(9) | – | 280 | 13 | – | 21 × |
| | tanh | 3 | 20 | 0.01 | Unknown(7) | Yes(7) | 642 | 71 | 69 | 9 × |
| | ReLU+tanh | 3 | 20 | 0.01 | Yes(7) | – | 543 | 25 | – | 21 × |
| 3 | ReLU | 3 | 20 | 0.01 | Yes(60) | – | 982 | 94 | – | 10 × |
| | sigmoid | 3 | 20 | 0.005 | Yes(60) | – | 1067 | 146 | – | 7 × |
| | tanh | 3 | 20 | 0.001 | Yes(60) | – | 1081 | 137 | – | 7 × |
| | ReLU+sigmoid | 3 | 20 | 0.005 | Unknown(60)* | – | 1944 | 150 | – | 12 × |
| 4 | ReLU | 3 | 20 | 0.005 | Yes(5) | – | 396 | 8 | – | 49 × |
| | sigmoid | 3 | 20 | 0.01 | Yes(10) | – | 253 | 21 | – | 12 × |
| | tanh | 3 | 20 | 0.01 | Yes(10) | – | 244 | 21 | – | 11 × |
| | ReLU+tanh | 3 | 20 | 0.01 | Yes(5) | – | 108 | 11 | – | 9 × |
| 5 | ReLU | 4 | 100 | 0.004 | Yes(10) | – | 5487 | 103 | – | 53 × |
| | sigmoid | 4 | 100 | 0.004 | No(10) | – | 8842 | 27 | – | 327 × |
| | tanh | 4 | 100 | 0.004 | Unknown(10)* | – | 7051 | 26 | – | 271 × |
| | ReLU+tanh | 4 | 100 | 0.004 | Unknown(10)* | – | 7369 | 26 | – | 283 × |
| 6 | ReLU | 4 | 20 | 0.01 | Yes(10) | Yes(10) | 7842 | 1126 | 12 | 653 × |
| | sigmoid | 4 | 20 | 0.01 | No(7) | – | 32499 | 77 | – | 422 × |
| | tanh | 4 | 20 | 0.01 | No(7) | – | 3683 | 11 | – | 334 × |
| | ReLU+tanh | 4 | 20 | 0.01 | Yes(10) | Yes(10) | 10032 | 1410 | 674 | 14 × |