

##### For Quadratic Function #####

For N1 : 2

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 39

Epochs it converged:

[154, 205, 146, 281, 138, 144, 178, 161, 168, 185, 149, 149, 240, 197, 156, 195, 169, 149, 199, 145, 155, 144, 175, 355, 157, 192, 158, 209, 170, 291, 159, 169, 137, 177, 190, 172, 260, 166, 162, 193, 227, 176, 203, 187, 150, 166, 164, 215, 137, 202, 152, 235, 152, 177, 164, 129, 161, 152, 195, 146, 219]

Mean epochs : 180.459016393

Max epoch: 355

Min epoch: 129

Median epochs: 169

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For N1 : 4

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 11

Epochs it converged:

[115, 125, 113, 108, 180, 136, 131, 156, 136, 173, 172, 107, 131, 190, 117, 136, 132, 141, 146, 98, 122, 125, 128, 161, 214, 121, 136, 117, 134, 150, 114, 105, 138, 135, 93, 128, 101, 159, 100, 126, 100, 116, 134, 114, 102, 157, 132, 159, 128, 151, 178, 102, 170, 204, 153, 122, 131, 117, 124, 158, 121, 126, 157, 132, 100, 141, 125, 111, 88, 124, 103, 138, 180, 161, 139, 118, 85, 126, 126, 150, 107, 121, 120, 226, 140, 146, 155, 131, 165]

Mean epochs : 134.426966292

Max epoch: 226

Min epoch: 85

Median epochs: 131

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For N1 : 6

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 4

Epochs it converged:

[127, 109, 138, 102, 95, 93, 142, 110, 102, 122, 99, 104, 111, 116, 101, 168, 109, 124, 107, 126, 103, 141, 119, 135, 120, 91, 93, 95, 83, 141, 121, 94, 149, 147, 161, 108, 118, 119, 89, 189, 83, 76, 113, 143, 109, 154, 102, 128, 93, 127, 140, 129, 111, 160, 84, 87, 135, 102, 102, 98, 107, 126, 95, 92, 108, 123, 131, 126, 112, 109, 113, 116, 134, 108, 130, 93, 111, 114, 107, 140, 118, 129, 137, 108, 145, 132, 104, 124, 104, 130, 112, 216, 127, 163, 120, 85]

Mean epochs : 118.1875

Max epoch: 216

Min epoch: 76

Median epochs: 113.5

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For N1 : 8

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 0

Epochs it converged:

[189, 90, 105, 122, 87, 100, 117, 76, 106, 118, 103, 117, 88, 102, 104, 147, 119, 100, 81, 92, 102, 105, 94, 95, 100, 153, 107, 80, 110, 93, 134, 102, 95, 127, 113, 211, 92, 92, 98, 132, 85, 79, 147, 94, 103, 121, 100, 121, 129, 72, 128, 124, 91, 100, 202, 115, 84, 129, 79, 99, 88, 92, 120, 87, 89, 111, 83, 119, 100, 77, 141, 85, 129, 90, 117, 89, 102, 1063, 94, 118, 127, 88, 118, 82, 87, 97, 108, 108, 107, 230, 98, 96, 87, 165, 80, 191, 111, 109, 86, 89]

Mean epochs : 118.58

Max epoch: 1063

Min epoch: 72

Median epochs: 102.0

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For N1 : 10

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 7

Epochs it converged:

[95, 118, 180, 71, 111, 98, 88, 77, 123, 742, 121, 96, 111, 79, 96, 81, 100, 91, 82, 76,

75, 84, 132, 107, 102, 79, 90, 94, 441, 120, 71, 102, 86, 79, 133, 124, 107, 109, 105, 171, 106, 86, 101, 77, 94, 110, 88, 94, 79, 90, 91, 105, 79, 77, 88, 112, 117, 85, 82, 100, 119, 114, 104, 96, 598, 80, 93, 94, 93, 167, 81, 102, 159, 116, 80, 126, 82, 93, 77, 101, 89, 74, 82, 99, 74, 97, 140, 81, 102, 104, 77, 83, 506]

Mean epochs : 119.258064516

Max epoch: 742

Min epoch: 71

Median epochs: 96

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For N1 : 2

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 49

Epochs it converged:

[832, 916, 1741, 1082, 803, 807, 778, 880, 1021, 967, 1532, 928, 760, 845, 1017, 1371, 803, 1039, 1093, 1161, 1043, 914, 853, 1259, 1269, 695, 1473, 907, 1454, 814, 1400, 829, 843, 1341, 839, 1786, 736, 1080, 768, 879, 1048, 1011, 1164, 720, 822, 752, 1035, 751, 751, 889, 929]

Mean epochs : 1008.43137255

Max epoch: 1786

Min epoch: 695

Median epochs: 916

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For N1 : 4

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 13

Epochs it converged:

[842, 696, 1107, 825, 807, 1670, 706, 1036, 643, 581, 803, 797, 931, 730, 751, 869, 1218, 754, 1773, 1106, 689, 877, 1169, 1066, 800, 1080, 1612, 793, 1027, 751, 1327, 897, 594, 1616, 1400, 793, 937, 635, 662, 942, 751, 741, 767, 701, 799, 924, 607, 1165, 639, 982, 656, 623, 806, 885, 958, 802, 682, 628, 1456, 738, 641, 651, 885, 645, 611, 898, 688, 841, 697, 766, 1064, 956, 736, 884, 671, 1699, 764, 1277, 1618, 769, 756, 828, 751, 721, 793, 809, 749]

Mean epochs : 894.137931034

Max epoch: 1773

Min epoch: 581

Median epochs: 800

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For N1 : 6

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 3

Epochs it converged:

[479, 664, 584, 513, 1464, 844, 728, 1045, 759, 757, 568, 853, 1091, 743, 756, 724, 821, 673, 658, 645, 772, 726, 707, 747, 739, 664, 725, 643, 731, 633, 787, 775, 746, 672, 753, 694, 995, 665, 615, 550, 609, 590, 928, 740, 604, 1196, 717, 731, 1162, 1090, 1927, 1268, 808, 608, 617, 657, 885, 1050, 852, 1446, 716, 684, 480, 633, 565, 798, 479, 729, 829, 691, 441, 635, 767, 716, 981, 616, 640, 624, 681, 682, 1318, 715, 650, 775, 557, 751, 775, 924, 1307, 508, 812, 1468, 764, 627, 602, 759, 846]

Mean epochs : 780.804123711

Max epoch: 1927

Min epoch: 441

Median epochs: 728

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For N1 : 8

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 2

Epochs it converged:

[546, 618, 445, 606, 591, 589, 682, 708, 656, 863, 635, 436, 619, 524, 638, 612, 619, 654, 703, 704, 901, 872, 688, 624, 667, 586, 568, 608, 784, 616, 715, 716, 804, 835, 1134, 634, 969, 680, 504, 655, 666, 586, 623, 561, 671, 564, 696, 596, 595, 875, 668,

613, 522, 614, 792, 531, 1032, 603, 765, 794, 510, 708, 705, 448, 716, 729, 671, 636, 640, 622, 992, 576, 579, 537, 616, 513, 576, 734, 544, 741, 802, 898, 563, 708, 590, 606, 659, 975, 840, 589, 580, 571, 539, 594, 559, 685, 628, 722]

Mean epochs : 666.081632653

Max epoch: 1134

Min epoch: 436

Median epochs: 634.5

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For N1 : 10

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:

[617, 463, 592, 705, 470, 644, 592, 614, 488, 584, 516, 524, 685, 703, 562, 521, 709, 479, 814, 675, 397, 660, 699, 652, 678, 608, 517, 600, 607, 719, 739, 575, 515, 741, 531, 760, 570, 722, 568, 628, 537, 517, 477, 583, 667, 488, 769, 694, 575, 551, 1011, 693, 603, 756, 533, 955, 551, 467, 713, 768, 513, 518, 502, 696, 592, 597, 541, 639, 584, 447, 651, 675, 660, 656, 595, 747, 515, 531, 569, 615, 474, 452, 519, 780, 869, 638, 539, 647, 695, 528, 718, 570, 598, 602, 507, 560, 689, 962, 610, 783]

Mean epochs : 619.34

Max epoch: 1011

Min epoch: 397

Median epochs: 601.0

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For N1 : 2

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1.5

Number of times neural network did not converge : 96

Epochs it converged:

[1840, 1731, 1841, 1816]

Mean epochs : 1807.0

Max epoch: 1841

Min epoch: 1731

Median epochs: 1828.0

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For N1 : 4

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1.5

Number of times neural network did not converge : 81



Epochs it converged:

[1907, 1873, 1940, 1844, 1925, 1916, 1674, 1744, 1698, 1975, 1900, 1974, 1864, 1951, 1674, 1628, 1639, 1881, 1859]

Mean epochs : 1835.05263158

Max epoch: 1975

Min epoch: 1628

Median epochs: 1873

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For N1 : 6

For alpha: 0.1

For Weight and bias range: -0.5 0.5

x0: 1.5

Number of times neural network did not converge : 72

Epochs it converged:

[1598, 1876, 1277, 1823, 1571, 1681, 1769, 1944, 1835, 1867, 1805, 1784, 1620, 1729, 1836, 1825, 1484, 1970, 1862, 1839, 1938, 1726, 1756, 1965, 1838, 1663, 1873, 1715]

Mean epochs : 1766.75

Max epoch: 1970

Min epoch: 1277

Median epochs: 1814.0

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For N1 : 8  
For alpha: 0.1  
For Weight and bias range: -0.5 0.5  
x0: 1.5

Number of times neural network did not converge : 57

Epochs it converged:

[1561, 1768, 1849, 1690, 1834, 1918, 1492, 1547, 1483, 1970, 1536, 1683, 1432,  
1868, 1585, 1903, 1921, 1862, 1763, 1453, 1933, 1997, 1881, 1744, 1610, 1991, 1581,  
1978, 1989, 1833, 1770, 1684, 1893, 1790, 1988, 1721, 1639, 1909, 1551, 1580, 1573,  
1595, 1822]

Mean epochs : 1748.13953488

Max epoch: 1997

Min epoch: 1432

Median epochs: 1768

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For N1 : 10  
For alpha: 0.1  
For Weight and bias range: -0.5 0.5  
x0: 1.5

Number of times neural network did not converge : 35

Epochs it converged:

[1847, 1764, 1583, 1648, 1831, 1908, 1729, 1978, 1527, 1831, 1998, 1921, 1699, 1723, 1985, 1690, 1919, 1783, 1792, 1636, 1804, 1504, 1392, 1680, 1610, 1650, 1935, 1609, 1612, 1744, 1749, 1882, 1359, 1991, 1548, 1645, 1583, 1749, 1742, 1810, 1895, 1711, 1433, 1861, 1676, 1690, 1946, 1745, 1731, 1637, 1977, 1999, 1406, 1841, 1906, 1966, 1718, 1931, 1624, 1929, 1658, 1628, 1969, 1743, 1405]

Mean epochs : 1744.84615385

Max epoch: 1999

Min epoch: 1359

Median epochs: 1743

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For N1 : 2

For alpha: 0.1

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 23

Epochs it converged:

[184, 147, 145, 155, 174, 143, 162, 128, 121, 135, 171, 124, 131, 113, 128, 144, 156, 203, 232, 131, 516, 134, 251, 136, 128, 130, 123, 147, 128, 148, 120, 175, 148, 156, 138, 147, 147, 157, 142, 156, 174, 187, 114, 111, 131, 162, 166, 182, 239, 140, 153, 149, 134, 141, 159, 124, 142, 131, 136, 821, 152, 152, 142, 219, 115, 124, 160, 171, 187, 122, 130, 140, 212, 146, 286, 115, 124]

Mean epochs : 165.545454545

Max epoch: 821

Min epoch: 111

Median epochs: 146

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For N1 : 4

For alpha: 0.1

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 1

Epochs it converged:

[96, 245, 99, 93, 264, 93, 112, 89, 99, 92, 108, 113, 99, 119, 106, 93, 113, 98, 108, 93, 106, 111, 106, 99, 127, 183, 1336, 127, 106, 86, 69, 97, 73, 110, 88, 520, 98, 106, 118, 303, 107, 83, 133, 72, 103, 93, 171, 107, 104, 160, 158, 113, 90, 94, 101, 219, 100, 154, 191, 120, 134, 101, 79, 92, 117, 103, 116, 100, 69, 141, 93, 114, 162, 94, 142, 113, 122, 100, 116, 82, 127, 83, 96, 116, 101, 121, 98, 105, 81, 143, 118, 113, 89, 95, 145, 140, 115, 135, 126]

Mean epochs : 132.434343434

Max epoch: 1336

Min epoch: 69

Median epochs: 106

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For N1 : 6

For alpha: 0.1

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 10

Epochs it converged:

[62, 61, 82, 68, 77, 78, 75, 88, 93, 441, 86, 85, 68, 84, 105, 82, 71, 74, 69, 117, 876, 109, 106, 65, 74, 79, 101, 94, 74, 72, 556, 89, 100, 70, 68, 72, 61, 74, 58, 76, 120, 103, 72, 102, 105, 75, 259, 89, 63, 71, 59, 91, 60, 68, 59, 106, 80, 187, 76, 47, 101, 47, 82, 76, 80, 97, 91, 97, 76, 68, 80, 827, 95, 70, 74, 72, 998, 85, 411, 70, 95, 59, 64, 117, 79, 441, 87, 78, 54, 91]

Mean epochs : 127.711111111

Max epoch: 998

Min epoch: 47

Median epochs: 79.5

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For N1 : 8

For alpha: 0.1

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 11

Epochs it converged:

[48, 126, 80, 63, 62, 85, 73, 51, 69, 1214, 112, 55, 74, 1395, 913, 111, 74, 70, 57, 70, 60, 61, 68, 957, 62, 73, 132, 63, 69, 89, 54, 78, 48, 1331, 82, 82, 1461, 198, 85, 76, 66, 58, 79, 800, 59, 67, 63, 212, 60, 160, 89, 80, 69, 114, 56, 1211, 103, 62, 80, 58, 83, 113, 102, 510, 58, 85, 348, 86, 74, 107, 157, 56, 73, 45, 49, 72, 53, 71, 60, 69, 49, 54, 83, 54, 50, 50, 89, 65, 54]

Mean epochs : 183.101123596

Max epoch: 1461

Min epoch: 45

Median epochs: 73

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For N1 : 10

For alpha: 0.1

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 14

Epochs it converged:

[81, 59, 49, 69, 99, 87, 58, 65, 76, 211, 69, 59, 59, 54, 49, 43, 49, 49, 107, 47, 75, 77, 50, 46, 83, 74, 44, 183, 61, 46, 50, 692, 41, 75, 54, 57, 51, 81, 1045, 54, 1566, 60, 61, 77, 72, 79, 64, 90, 51, 109, 52, 104, 71, 54, 51, 46, 75, 1845, 59, 55, 105, 76, 55, 53, 58, 59, 69, 64, 54, 51, 56, 259, 77, 46, 62, 71, 51, 53, 49, 53, 61, 69, 77, 101, 64, 47]

Mean epochs : 126.26744186

Max epoch: 1845

Min epoch: 41

Median epochs: 61.0

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For N1 : 2

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 13

Epochs it converged:

[597, 859, 626, 909, 632, 942, 537, 759, 563, 889, 522, 792, 662, 1480, 665, 569, 543, 665, 624, 724, 682, 575, 815, 684, 609, 909, 604, 678, 736, 648, 583, 602, 907, 719, 820, 778, 552, 703, 606, 562, 669, 578, 595, 1372, 605, 676, 574, 617, 546, 562, 577, 899, 620, 696, 692, 620, 623, 617, 676, 599, 668, 1151, 871, 742, 564, 643, 672, 734, 609, 547, 599, 741, 797, 807, 632, 1010, 553, 652, 776, 784, 731, 707, 713, 654, 601, 630, 692]

Mean epochs : 701.425287356

Max epoch: 1480

Min epoch: 522

Median epochs: 665

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For N1 : 4

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:

[581, 588, 503, 643, 364, 664, 475, 482, 438, 492, 579, 369, 538, 545, 472, 609, 511, 422, 529, 602, 478, 460, 526, 479, 414, 474, 546, 449, 616, 564, 610, 550, 518, 644, 488, 663, 412, 503, 639, 510, 569, 434, 425, 371, 508, 465, 436, 640, 647, 438, 458, 472, 455, 414, 481, 583, 499, 597, 558, 442, 464, 548, 496, 422, 401, 413, 445, 606, 515, 421, 451, 498, 540, 497, 495, 520, 544, 437, 638, 505, 542, 400, 498, 501, 734, 490, 511, 553, 533, 403, 478, 575, 640, 492, 437, 455, 551, 525, 554, 549]

Mean epochs : 511.18

Max epoch: 734

Min epoch: 364

Median epochs: 502.0

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For N1 : 6

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:

[381, 411, 497, 455, 406, 380, 367, 442, 422, 337, 378, 403, 355, 347, 414, 392, 399, 430, 401, 416, 481, 419, 395, 496, 449, 464, 405, 513, 448, 422, 348, 466, 313, 500,



389, 332, 443, 475, 362, 452, 418, 375, 443, 334, 456, 411, 405, 369, 554, 324, 329, 418, 357, 390, 449, 346, 370, 486, 457, 388, 402, 460, 403, 453, 333, 352, 421, 429, 473, 458, 434, 459, 531, 436, 482, 478, 411, 519, 451, 445, 446, 367, 455, 463, 495, 377, 356, 415, 416, 361, 384, 346, 450, 469, 405, 322, 494, 341, 488, 365]

Mean epochs : 417.29

Max epoch: 554

Min epoch: 313

Median epochs: 416.0

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For N1 : 8

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:

[360, 325, 421, 378, 380, 385, 367, 343, 341, 401, 308, 310, 447, 326, 312, 341, 362, 367, 436, 366, 445, 391, 314, 358, 351, 306, 311, 434, 309, 304, 355, 331, 292, 441, 352, 361, 379, 437, 452, 386, 405, 550, 361, 353, 375, 363, 355, 384, 377, 408, 327, 396, 392, 477, 334, 393, 347, 314, 412, 395, 321, 398, 321, 351, 376, 358, 413, 307, 441, 315, 426, 407, 388, 351, 355, 341, 314, 394, 341, 333, 339, 352, 391, 412, 368, 354, 312, 362, 340, 423, 309, 385, 324, 451, 331, 396, 290, 392, 363, 373]

Mean epochs : 368.21

Max epoch: 550

Min epoch: 290

Median epochs: 362.0

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For N1 : 10

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 1

Epochs it converged:

[327, 354, 432, 334, 319, 300, 377, 292, 347, 433, 376, 348, 375, 284, 420, 344, 304, 403, 376, 294, 312, 340, 294, 358, 308, 324, 322, 308, 296, 332, 319, 416, 338, 441, 356, 339, 308, 319, 306, 273, 323, 400, 341, 357, 443, 333, 349, 421, 327, 357, 327, 326, 336, 369, 366, 321, 317, 350, 504, 294, 290, 346, 422, 336, 377, 288, 317, 336, 390, 329, 367, 396, 328, 368, 432, 325, 322, 339, 301, 355, 360, 287, 295, 332, 314, 312, 356, 312, 362, 276, 308, 396, 333, 319, 299, 412, 283, 358, 378]

Mean epochs : 344.090909091

Max epoch: 504

Min epoch: 273

Median epochs: 336

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For N1 : 2

For alpha: 0.1

For Weight and bias range: -1 1  
x0: 1.5

Number of times neural network did not converge : 35

Epochs it converged:

[1943, 1920, 1635, 1948, 1560, 1619, 1943, 1698, 1616, 1631, 1415, 1502, 1761,  
1700, 1947, 1727, 1475, 1629, 1793, 1535, 1492, 1625, 1824, 1921, 1667, 1598, 1980,  
1858, 1874, 1371, 1744, 1738, 1649, 1633, 1631, 1393, 1863, 1543, 1880, 1474, 1466,  
1609, 1771, 1450, 1318, 1747, 1823, 1662, 1498, 1964, 1594, 1724, 1628, 1575, 1992,  
1637, 1576, 1960, 1673, 1929, 1533, 1435, 1854, 1976, 1476]

Mean epochs : 1686.53846154

Max epoch: 1992

Min epoch: 1318

Median epochs: 1649

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For N1 : 4

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1.5

Number of times neural network did not converge : 1

Epochs it converged:

[1299, 1196, 1053, 1516, 1337, 1417, 1356, 1214, 1904, 1548, 1410, 1486, 1385,  
1456, 1360, 837, 799, 1442, 1285, 1144, 1563, 1447, 1114, 1810, 1281, 1563, 1327,  
1136, 1433, 1277, 1715, 918, 1139, 1608, 1722, 1261, 1591, 1314, 1612, 1405, 1302,

1384, 1953, 1267, 1059, 1623, 1249, 1654, 1244, 1320, 1364, 1392, 1482, 1711, 1206, 1444, 1469, 1289, 1725, 1434, 1287, 1424, 1498, 1481, 1329, 1109, 1469, 1414, 1276, 1308, 1363, 1703, 1454, 1770, 1202, 1688, 1233, 1503, 1897, 1263, 1263, 1250, 1282, 1384, 1388, 1491, 1388, 1748, 1987, 1721, 1228, 1625, 1111, 1309, 1659, 1194, 1246, 1149, 1560]

Mean epochs : 1403.08080808

Max epoch: 1987

Min epoch: 799

Median epochs: 1385

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For N1 : 6

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[1152, 1173, 1134, 1039, 1012, 1285, 1239, 854, 1308, 1261, 1301, 1252, 979, 841, 1245, 1048, 1220, 1543, 1460, 1166, 1328, 903, 1041, 883, 1120, 1213, 1219, 1328, 1452, 1044, 1034, 876, 1296, 1211, 1314, 1366, 1079, 1017, 1159, 1488, 1246, 983, 1064, 1351, 1496, 1279, 1171, 1346, 1096, 960, 1135, 1073, 904, 1004, 1624, 1622, 1456, 1511, 1105, 1203, 1035, 1216, 833, 1087, 1252, 1317, 1136, 1138, 1283, 1290, 897, 979, 961, 1306, 1004, 1333, 1062, 966, 1329, 1061, 1108, 947, 1183, 1208, 1369, 1299, 1663, 1157, 1335, 1509, 1067, 998, 1132, 1082, 1259, 1466, 1349, 1126, 937, 1346]

Mean epochs : 1185.37

Max epoch: 1663

Min epoch: 833

Median epochs: 1172.0

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For N1 : 8

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[1150, 895, 938, 1063, 1127, 1120, 1174, 1528, 1337, 1280, 857, 1025, 1114, 1093, 979, 1151, 1126, 1272, 1234, 969, 959, 800, 896, 1227, 1002, 1223, 1030, 1192, 1067, 916, 1374, 1016, 861, 1248, 962, 985, 1299, 859, 952, 955, 1111, 1136, 1047, 845, 963, 1093, 1063, 1370, 935, 1133, 1181, 917, 831, 838, 1032, 1021, 899, 1029, 977, 1102, 936, 1180, 945, 1277, 965, 1128, 1180, 1144, 1030, 1226, 1027, 974, 878, 1156, 1033, 1023, 1393, 1234, 1189, 1144, 1011, 823, 1007, 1263, 1078, 1266, 1011, 1114, 1141, 932, 1153, 959, 1005, 1162, 1298, 996, 1150, 1152, 1107, 1256]

Mean epochs : 1077.24

Max epoch: 1528

Min epoch: 800

Median epochs: 1065.0

=====

For N1 : 10

For alpha: 0.1

For Weight and bias range: -1 1

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[1127, 1206, 974, 938, 1013, 920, 838, 924, 991, 757, 894, 868, 998, 1224, 1221,  
1122, 937, 873, 1054, 980, 1268, 868, 807, 805, 714, 1223, 901, 1080, 973, 914, 985,  
1054, 997, 989, 860, 1046, 1009, 743, 1046, 1143, 996, 988, 1018, 1103, 873, 985,  
1048, 1021, 1395, 942, 1185, 969, 898, 825, 896, 971, 849, 823, 935, 1046, 1040, 902,  
1206, 981, 992, 864, 1046, 1312, 828, 1021, 1056, 962, 1245, 1015, 825, 890, 893,  
1174, 911, 957, 1025, 915, 816, 1117, 1092, 875, 1122, 1158, 987, 896, 1066, 1010,  
917, 1047, 1043, 911, 1110, 1088, 1232, 966]

Mean epochs : 995.63

Max epoch: 1395

Min epoch: 714

Median epochs: 987.5

=====

For N1 : 2

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 39

Epochs it converged:

[223, 187, 751, 115, 104, 129, 189, 323, 183, 141, 120, 246, 148, 1951, 131, 126, 121, 156, 135, 118, 248, 128, 143, 370, 137, 172, 113, 125, 115, 121, 150, 544, 170, 1805, 153, 127, 608, 108, 108, 232, 1556, 748, 138, 127, 129, 114, 347, 113, 112, 133, 264, 185, 1191, 302, 173, 128, 125, 130, 268, 103, 141]

Mean epochs : 291.819672131

Max epoch: 1951

Min epoch: 103

Median epochs: 141

=====

For N1 : 4

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 13

Epochs it converged:

[71, 245, 88, 87, 92, 326, 109, 58, 67, 104, 83, 60, 76, 106, 85, 118, 92, 99, 110, 114, 66, 92, 102, 78, 79, 203, 94, 93, 111, 165, 64, 154, 92, 87, 97, 104, 95, 150, 496, 82, 78, 81, 502, 129, 827, 46, 72, 98, 136, 113, 115, 746, 149, 134, 67, 61, 121, 170, 73, 153, 717, 75, 114, 85, 313, 130, 65, 71, 109, 75, 352, 79, 420, 76, 108, 89, 97, 66, 983, 60, 89, 614, 101, 1947, 91, 139, 57]

Mean epochs : 180.310344828

Max epoch: 1947

Min epoch: 46

Median epochs: 97

=====

For N1 : 6

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 12

Epochs it converged:

[408, 97, 60, 46, 71, 68, 42, 43, 46, 58, 103, 214, 51, 66, 101, 75, 90, 55, 50, 1111, 44, 43, 62, 53, 17, 64, 117, 51, 82, 75, 120, 46, 45, 51, 65, 61, 56, 262, 785, 65, 76, 141, 109, 44, 149, 1184, 652, 63, 692, 33, 72, 50, 875, 67, 43, 84, 35, 55, 68, 66, 99, 77, 84, 59, 478, 63, 89, 66, 130, 229, 61, 42, 69, 403, 51, 56, 55, 185, 1124, 78, 67, 72, 72, 59, 66, 35, 57, 105]

Mean epochs : 154.636363636

Max epoch: 1184

Min epoch: 17

Median epochs: 66.5

=====



For N1 : 8

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 20

Epochs it converged:

[44, 42, 22, 53, 207, 1667, 44, 507, 119, 93, 776, 601, 1778, 44, 30, 39, 52, 546, 39, 69, 96, 471, 526, 62, 1021, 50, 44, 29, 41, 120, 39, 1109, 55, 952, 54, 1601, 46, 77, 44, 57, 33, 84, 17, 47, 947, 173, 56, 596, 818, 223, 81, 44, 30, 1282, 152, 93, 333, 23, 93, 55, 383, 78, 250, 54, 91, 46, 156, 89, 144, 70, 106, 682, 52, 420, 38, 46, 146, 90, 33, 68]

Mean epochs : 268.6

Max epoch: 1778

Min epoch: 17

Median epochs: 79.5

=====

For N1 : 10

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 30

Epochs it converged:

[42, 53, 52, 75, 182, 51, 33, 14, 27, 91, 50, 45, 153, 1288, 53, 46, 112, 607, 25, 29, 31,

188, 171, 382, 31, 60, 50, 47, 67, 48, 49, 24, 705, 39, 17, 33, 87, 40, 34, 26, 271, 25,  
71, 30, 36, 23, 360, 48, 464, 26, 53, 71, 68, 32, 261, 1854, 31, 13, 413, 38, 22, 24, 146,  
850, 26, 67, 29, 280, 28, 103]

Mean epochs : 156.0

Max epoch: 1854

Min epoch: 13

Median epochs: 49.5

=====

For N1 : 2

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 24

Epochs it converged:

[621, 667, 541, 694, 510, 666, 527, 518, 617, 683, 635, 590, 638, 748, 679, 601, 633,  
609, 600, 652, 565, 585, 650, 668, 707, 655, 489, 553, 781, 630, 802, 1182, 732, 545,  
664, 510, 717, 581, 522, 542, 855, 845, 686, 647, 554, 523, 498, 971, 528, 700, 495,  
466, 690, 515, 584, 530, 580, 597, 826, 713, 627, 583, 705, 623, 514, 674, 588, 552,  
609, 522, 527, 559, 590, 846, 1342, 759]

Mean epochs : 643.842105263

Max epoch: 1342

Min epoch: 466

Median epochs: 619.0

=====

For N1 : 4

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:

[412, 553, 447, 416, 320, 482, 423, 449, 513, 452, 346, 519, 437, 415, 459, 361, 430, 325, 481, 505, 497, 413, 480, 414, 297, 357, 525, 484, 427, 433, 354, 393, 393, 429, 565, 318, 523, 474, 429, 557, 396, 661, 435, 439, 418, 542, 339, 520, 320, 394, 424, 338, 343, 462, 423, 470, 448, 440, 459, 429, 471, 453, 471, 407, 439, 405, 455, 467, 419, 436, 371, 294, 383, 436, 445, 373, 432, 535, 457, 379, 515, 331, 452, 462, 518, 437, 504, 445, 265, 423, 515, 438, 526, 428, 449, 439, 497, 514, 603, 542]

Mean epochs : 440.38

Max epoch: 661

Min epoch: 265

Median epochs: 438.5

=====

For N1 : 6

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 4

Epochs it converged:

[285, 314, 358, 262, 389, 339, 385, 286, 396, 296, 348, 367, 364, 403, 726, 318, 317, 297, 396, 322, 422, 404, 259, 408, 368, 907, 479, 378, 305, 702, 560, 287, 399, 564, 393, 334, 292, 361, 287, 302, 351, 423, 1520, 286, 355, 301, 408, 293, 321, 308, 417, 348, 419, 431, 361, 409, 490, 325, 396, 425, 250, 292, 562, 403, 272, 291, 460, 272, 421, 513, 436, 477, 1735, 279, 901, 293, 319, 275, 338, 278, 282, 431, 370, 438, 282, 387, 382, 315, 336, 296, 350, 356, 338, 348, 328, 455]

Mean epochs : 405.489583333

Max epoch: 1735

Min epoch: 250

Median epochs: 357.0

=====

For N1 : 8

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 7

Epochs it converged:

[398, 278, 289, 278, 427, 383, 330, 256, 291, 273, 338, 349, 305, 305, 338, 289, 297, 267, 361, 342, 260, 315, 243, 270, 291, 257, 299, 327, 263, 369, 322, 302, 288, 371, 268, 281, 301, 264, 296, 357, 324, 264, 783, 287, 311, 520, 282, 303, 276, 319, 310,

260, 427, 288, 264, 292, 332, 316, 353, 294, 256, 286, 272, 277, 330, 283, 309, 313, 343, 1368, 292, 272, 294, 428, 672, 317, 301, 339, 313, 257, 719, 256, 299, 295, 249, 351, 1319, 310, 348, 348, 272, 543, 281]

Mean epochs : 346.827956989

Max epoch: 1368

Min epoch: 243

Median epochs: 301

=====

For N1 : 10

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 8

Epochs it converged:

[264, 288, 290, 268, 322, 311, 282, 274, 253, 237, 302, 259, 233, 239, 248, 326, 270, 260, 563, 307, 263, 285, 297, 268, 384, 256, 275, 305, 286, 322, 273, 262, 275, 341, 298, 554, 286, 295, 306, 312, 275, 321, 268, 601, 351, 249, 300, 253, 306, 255, 279, 693, 293, 224, 336, 360, 299, 678, 336, 251, 249, 255, 326, 234, 302, 290, 249, 352, 271, 319, 257, 265, 303, 269, 294, 303, 922, 328, 569, 302, 265, 264, 295, 625, 322, 317, 310, 258, 264, 409, 283, 282]

Mean epochs : 319.782608696

Max epoch: 922

Min epoch: 224

Median epochs: 290.0

=====

For N1 : 2

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1.5

Number of times neural network did not converge : 26

Epochs it converged:

[1301, 1247, 1346, 1401, 1271, 1338, 1392, 1709, 1627, 1310, 1478, 1546, 1396,  
1281, 1670, 1250, 1358, 1284, 1395, 1407, 1464, 1477, 1332, 1405, 1556, 1512, 1354,  
1226, 1570, 1423, 1631, 1353, 1389, 1520, 1311, 1807, 1799, 1478, 1566, 1449, 1875,  
1562, 1528, 1837, 1499, 1629, 1354, 1436, 1301, 1633, 1367, 1360, 1456, 1469, 1563,  
1732, 1919, 1561, 1341, 1498, 1558, 1845, 1496, 1509, 1758, 1631, 1507, 1338, 1863,  
1530, 1448, 1452, 1543, 1818]

Mean epochs : 1497.90540541

Max epoch: 1919

Min epoch: 1226

Median epochs: 1477.5

=====

For N1 : 4

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[1120, 1153, 1280, 1194, 937, 1234, 1293, 1290, 1271, 1258, 1054, 1082, 1259, 1221, 1190, 1184, 1225, 1218, 1140, 998, 1147, 1175, 1084, 1019, 1123, 1167, 1415, 1107, 1186, 1258, 1127, 1126, 1150, 859, 1342, 1194, 1073, 1301, 1116, 1137, 1122, 910, 883, 1239, 1263, 1517, 1130, 1277, 1082, 1225, 1360, 1096, 1284, 1195, 1105, 1293, 1527, 1022, 1316, 1127, 1211, 1789, 1424, 1339, 996, 1211, 1365, 1048, 1218, 1313, 1266, 1067, 1190, 948, 1308, 1000, 1071, 1258, 1182, 1394, 1290, 1236, 1579, 1076, 1085, 856, 1213, 1227, 1088, 1432, 1248, 1223, 1136, 1028, 819, 1030, 1088, 1292, 1035, 1105]

Mean epochs : 1183.64

Max epoch: 1789

Min epoch: 819

Median epochs: 1188.0

=====

For N1 : 6

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[768, 1060, 855, 1119, 900, 848, 834, 1079, 960, 1121, 1239, 897, 853, 947, 1448, 795, 902, 1045, 1025, 1125, 1221, 1053, 801, 913, 855, 1038, 945, 838, 1109, 1070, 910, 1072, 832, 788, 927, 983, 985, 1129, 971, 1025, 923, 815, 956, 921, 786, 1314, 1040, 777, 772, 754, 1283, 973, 990, 919, 822, 796, 1094, 1005, 1152, 1052, 1210, 1003, 1182, 943, 726, 944, 935, 1112, 1077, 954, 983, 1069, 985, 765, 973, 925, 1195, 1539, 811, 1032, 1060, 963, 743, 855, 757, 955, 1043, 812, 826, 1010, 835, 937, 929, 730, 998, 864, 895, 920, 1439, 1041]

Mean epochs : 974.04

Max epoch: 1539

Min epoch: 726

Median epochs: 955.5

=====

For N1 : 8

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[677, 817, 1199, 773, 726, 895, 703, 997, 722, 777, 799, 1061, 892, 732, 943, 929, 979, 800, 754, 865, 798, 743, 678, 719, 680, 822, 1670, 712, 759, 819, 1134, 714, 773, 836, 893, 868, 987, 652, 983, 829, 1030, 747, 702, 935, 927, 799, 1053, 869, 740, 946, 818, 809, 726, 731, 720, 643, 875, 683, 832, 761, 901, 691, 866, 857, 864, 784, 857, 699, 874, 689, 1013, 765, 929, 773, 742, 1201, 753, 778, 774, 714, 890, 821, 838, 850, 834, 874, 741, 742, 757, 863, 730, 750, 775, 705, 832, 965, 702, 865, 829, 754]

Mean epochs : 830.96



Max epoch: 1670

Min epoch: 643

Median epochs: 804.5

=====

For N1 : 10

For alpha: 0.1

For Weight and bias range: -1.5 1.5

x0: 1.5

Number of times neural network did not converge : 1

Epochs it converged:

[815, 710, 821, 852, 751, 689, 767, 768, 770, 744, 819, 701, 739, 762, 703, 759, 819, 782, 670, 870, 822, 746, 660, 753, 701, 849, 921, 744, 705, 849, 793, 769, 701, 661, 676, 822, 797, 761, 690, 764, 786, 1049, 780, 742, 759, 847, 861, 830, 666, 649, 914, 681, 708, 760, 832, 738, 909, 752, 666, 935, 778, 744, 685, 781, 817, 945, 633, 783, 844, 642, 696, 645, 755, 751, 1200, 723, 882, 761, 763, 732, 718, 679, 775, 683, 706, 700, 697, 660, 748, 733, 798, 667, 696, 759, 944, 684, 724, 1045, 813]

Mean epochs : 769.171717172

Max epoch: 1200

Min epoch: 633

Median epochs: 759

=====

=====

For N1 : 2

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 70

Epochs it converged:

[91, 102, 78, 112, 122, 84, 90, 83, 97, 74, 85, 90, 92, 82, 79, 102, 88, 72, 93, 92, 81, 78, 94, 85, 72, 95, 86, 80, 96, 81]

Mean epochs : 88.5333333333

Max epoch: 122

Min epoch: 72

Median epochs: 87.0

=====

For N1 : 4

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 35

Epochs it converged:

[75, 85, 88, 74, 119, 69, 71, 100, 87, 65, 84, 72, 59, 56, 76, 89, 99, 68, 86, 64, 81, 57, 94, 101, 99, 67, 52, 68, 88, 79, 70, 69, 95, 74, 69, 77, 73, 71, 413, 65, 78, 84, 97, 91, 67, 63, 97, 68, 78, 66, 69, 74, 72, 69, 79, 70, 85, 81, 57, 64, 79, 97, 68, 76, 77]

Mean epochs : 82.3692307692

Max epoch: 413

Min epoch: 52

Median epochs: 75

=====

For N1 : 6

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 0.5

Number of times neural network did not converge : 9

Epochs it converged:

[51, 71, 98, 105, 82, 55, 50, 52, 61, 60, 72, 65, 67, 71, 77, 103, 69, 54, 82, 59, 60, 63, 64, 60, 53, 66, 60, 52, 67, 66, 80, 123, 98, 88, 39, 88, 64, 73, 69, 78, 57, 65, 67, 60, 55, 78, 71, 63, 364, 56, 85, 72, 53, 80, 53, 60, 78, 68, 59, 42, 58, 67, 75, 90, 36, 61, 64, 55, 62, 59, 63, 103, 73, 64, 175, 80, 57, 68, 85, 72, 76, 69, 60, 68, 82, 57, 88, 80, 61, 78, 82]

Mean epochs : 73.2857142857

Max epoch: 364

Min epoch: 36

Median epochs: 67

=====

For N1 : 8  
For alpha: 0.2  
For Weight and bias range: -0.5 0.5  
x0: 0.5

Number of times neural network did not converge : 5

Epochs it converged:

[105, 52, 56, 34, 1919, 77, 83, 45, 98, 645, 62, 41, 296, 77, 140, 693, 63, 95, 81, 60, 57, 65, 124, 40, 1390, 581, 72, 1786, 60, 49, 68, 57, 83, 75, 209, 47, 91, 53, 115, 57, 1492, 51, 312, 57, 71, 48, 65, 131, 59, 57, 87, 138, 72, 78, 499, 72, 69, 109, 45, 49, 96, 55, 542, 58, 91, 243, 71, 80, 884, 50, 77, 72, 46, 287, 75, 70, 56, 64, 49, 46, 56, 59, 124, 86, 46, 54, 110, 73, 47, 70, 1300, 114, 89, 52, 67]

Mean epochs : 197.063157895

Max epoch: 1919

Min epoch: 34

Median epochs: 72

=====

For N1 : 10  
For alpha: 0.2  
For Weight and bias range: -0.5 0.5  
x0: 0.5

Number of times neural network did not converge : 13

Epochs it converged:

[222, 38, 89, 1107, 110, 71, 50, 60, 83, 101, 39, 58, 69, 54, 48, 44, 66, 412, 70, 64, 141, 96, 1108, 57, 58, 644, 114, 61, 66, 986, 55, 84, 79, 1544, 61, 72, 103, 269, 145, 349, 52, 52, 61, 61, 981, 41, 99, 55, 938, 79, 50, 44, 238, 48, 39, 73, 65, 72, 116, 510, 67, 68, 97, 87, 281, 68, 42, 391, 68, 47, 64, 50, 56, 101, 70, 223, 86, 95, 62, 277, 79, 765, 112, 45, 53, 253, 58]

Mean epochs : 187.195402299

Max epoch: 1544

Min epoch: 38

Median epochs: 71

=====

For N1 : 2

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 79

Epochs it converged:

[390, 583, 571, 777, 411, 459, 465, 411, 408, 478, 371, 381, 583, 565, 494, 326, 375, 569, 626, 581, 528]

Mean epochs : 492.952380952

Max epoch: 777

Min epoch: 326

Median epochs: 478

=====

For N1 : 4

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 63

Epochs it converged:

[419, 288, 410, 528, 768, 447, 445, 366, 580, 404, 376, 573, 430, 342, 445, 419, 327, 353, 442, 573, 496, 463, 387, 366, 788, 366, 477, 590, 695, 377, 342, 333, 360, 321, 430, 450, 705]

Mean epochs : 456.243243243

Max epoch: 788

Min epoch: 288

Median epochs: 430

=====

For N1 : 6

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 47

Epochs it converged:

[399, 294, 629, 305, 555, 335, 350, 467, 385, 391, 488, 416, 324, 451, 318, 316, 317, 506, 339, 415, 364, 476, 719, 562, 399, 310, 393, 643, 543, 366, 431, 343, 341, 402, 326, 532, 420, 472, 362, 338, 454, 373, 403, 327, 611, 263, 645, 387, 459, 432, 454, 569, 557]

Mean epochs : 427.849056604

Max epoch: 719

Min epoch: 263

Median epochs: 402

=====

For N1 : 8

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 24

Epochs it converged:

[398, 301, 581, 749, 344, 536, 387, 298, 389, 247, 363, 291, 425, 312, 401, 709, 359, 299, 382, 321, 306, 302, 331, 390, 414, 293, 298, 352, 330, 468, 305, 509, 344, 523, 324, 435, 465, 375, 340, 342, 390, 309, 317, 376, 304, 369, 445, 363, 339, 508, 510, 393, 438, 399, 376, 305, 353, 365, 228, 334, 680, 262, 355, 502, 366, 362, 413, 350, 327, 333, 302, 430, 319, 348, 408, 304]

Mean epochs : 381.842105263

Max epoch: 749

Min epoch: 228

Median epochs: 360.5

=====

For N1 : 10

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1

Number of times neural network did not converge : 29

Epochs it converged:

[340, 254, 478, 392, 440, 277, 369, 537, 319, 510, 383, 247, 337, 352, 288, 516, 237, 345, 297, 339, 348, 340, 328, 725, 482, 386, 410, 684, 333, 605, 577, 355, 548, 492, 348, 511, 484, 285, 352, 341, 325, 428, 389, 440, 324, 352, 454, 311, 279, 400, 489, 334, 352, 369, 334, 379, 577, 327, 361, 322, 406, 366, 291, 392, 541, 271, 362, 572, 352, 354, 414]

Mean epochs : 395.183098592

Max epoch: 725

Min epoch: 237

Median epochs: 361

=====



For N1 : 2  
For alpha: 0.2  
For Weight and bias range: -0.5 0.5  
x0: 1.5

Number of times neural network did not converge : 91

Epochs it converged:  
[1639, 988, 1565, 1230, 1297, 1647, 1310, 1840, 1075]

Mean epochs : 1399.0

Max epoch: 1840

Min epoch: 988

Median epochs: 1310

=====

For N1 : 4  
For alpha: 0.2  
For Weight and bias range: -0.5 0.5  
x0: 1.5

Number of times neural network did not converge : 72

Epochs it converged:  
[1554, 1468, 1967, 1167, 1322, 1045, 1323, 1016, 1464, 1144, 1112, 1156, 1080,  
1429, 1482, 1961, 1119, 1117, 1265, 1953, 1511, 1428, 1236, 1405, 1193, 1809, 1700,  
1079]

Mean epochs : 1375.17857143

Max epoch: 1967

Min epoch: 1016

Median epochs: 1322.5

=====

For N1 : 6

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1.5

Number of times neural network did not converge : 48

Epochs it converged:

[1430, 848, 1535, 1347, 925, 990, 1984, 868, 1737, 1670, 882, 1609, 1258, 1022, 666, 1397, 1308, 1470, 1318, 1371, 1329, 909, 1405, 1396, 1191, 926, 917, 904, 1203, 1279, 857, 1025, 1103, 1391, 1715, 1194, 1142, 1403, 1102, 1794, 1873, 1480, 1328, 1592, 1048, 1175, 1020, 1598, 1258, 1054, 1586, 1863]

Mean epochs : 1282.59615385

Max epoch: 1984

Min epoch: 666

Median epochs: 1293.5

=====

For N1 : 8

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1.5

Number of times neural network did not converge : 46

Epochs it converged:

[914, 1302, 1148, 773, 978, 883, 1842, 1563, 934, 1159, 946, 889, 849, 959, 1333, 908, 1065, 1187, 1219, 1016, 1186, 1180, 1599, 1544, 949, 1502, 1250, 1035, 1651, 1600, 1531, 1657, 1493, 1016, 943, 1363, 917, 823, 1313, 1115, 974, 974, 969, 1263, 962, 1638, 1046, 1427, 1176, 1730, 1846, 1973, 972, 1202]

Mean epochs : 1216.40740741

Max epoch: 1973

Min epoch: 773

Median epochs: 1167.5

=====

For N1 : 10

For alpha: 0.2

For Weight and bias range: -0.5 0.5

x0: 1.5

Number of times neural network did not converge : 31

Epochs it converged:

[1326, 1396, 909, 1356, 1641, 1103, 1950, 1100, 926, 816, 1106, 1349, 864, 797, 1089, 1130, 1016, 995, 1019, 984, 789, 859, 1049, 1464, 1264, 1048, 1016, 868, 1026,

951, 785, 1090, 1305, 921, 888, 1122, 1318, 810, 1241, 1401, 950, 938, 1076, 1168, 963, 1004, 1143, 974, 1103, 1149, 1112, 1127, 1093, 1096, 1146, 1093, 874, 879, 1068, 873, 837, 1152, 1330, 834, 908, 967, 1032, 1020, 1555]

Mean epochs : 1080.44927536

Max epoch: 1950

Min epoch: 785

Median epochs: 1049

=====

For N1 : 2

For alpha: 0.2

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 16

Epochs it converged:

[66, 59, 69, 61, 76, 81, 99, 934, 59, 80, 62, 98, 61, 100, 83, 69, 64, 92, 70, 84, 81, 113, 64, 67, 56, 57, 68, 623, 92, 107, 62, 68, 1484, 69, 69, 60, 78, 68, 84, 69, 67, 58, 426, 61, 85, 69, 90, 61, 62, 1171, 91, 65, 84, 59, 74, 184, 61, 63, 65, 66, 64, 77, 61, 65, 76, 65, 75, 148, 120, 213, 79, 203, 107, 62, 88, 59, 126, 91, 80, 68, 57, 136, 145, 64]

Mean epochs : 132.107142857

Max epoch: 1484

Min epoch: 56

Median epochs: 69.5

=====

For N1 : 4

For alpha: 0.2

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 3

Epochs it converged:

[39, 55, 50, 55, 41, 83, 61, 59, 49, 53, 51, 55, 46, 58, 53, 53, 74, 43, 58, 59, 64, 41, 46, 53, 31, 34, 46, 51, 54, 89, 39, 65, 49, 1141, 41, 55, 102, 61, 56, 51, 85, 50, 79, 60, 56, 75, 118, 53, 80, 107, 58, 51, 67, 76, 52, 46, 36, 56, 68, 310, 461, 55, 45, 192, 55, 67, 57, 48, 51, 59, 61, 59, 55, 58, 51, 57, 65, 55, 59, 50, 47, 52, 33, 62, 62, 43, 76, 43, 1009, 115, 221, 45, 131, 31, 67, 81, 45]

Mean epochs : 89.381443299

Max epoch: 1141

Min epoch: 31

Median epochs: 55

=====

For N1 : 6

For alpha: 0.2

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 8

Epochs it converged:

[27, 44, 37, 59, 101, 60, 30, 39, 58, 124, 87, 228, 40, 99, 35, 37, 35, 49, 29, 30, 52, 31, 28, 33, 44, 67, 52, 28, 644, 57, 46, 49, 58, 48, 31, 56, 53, 200, 76, 87, 47, 64, 43, 1868, 141, 36, 71, 270, 29, 179, 29, 62, 31, 421, 47, 41, 84, 36, 34, 33, 59, 87, 41, 47, 83, 69, 53, 45, 103, 728, 51, 37, 49, 34, 44, 38, 23, 38, 36, 92, 30, 175, 269, 36, 36, 44, 65, 81, 56, 32, 625, 153]

Mean epochs : 107.75

Max epoch: 1868

Min epoch: 23

Median epochs: 49.0

=====

For N1 : 8

For alpha: 0.2

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 11

Epochs it converged:

[63, 23, 102, 64, 31, 181, 722, 36, 149, 46, 32, 35, 50, 32, 44, 39, 165, 94, 579, 67, 38, 1376, 196, 83, 37, 41, 34, 33, 42, 53, 28, 37, 26, 29, 356, 31, 35, 46, 23, 33, 504, 28, 32, 55, 54, 83, 82, 121, 53, 193, 53, 30, 42, 70, 26, 25, 73, 25, 23, 45, 22, 1356, 37, 103, 30, 777, 45, 36, 169, 42, 39, 28, 1588, 33, 67, 98, 23, 79, 38, 26, 28, 34, 33, 36, 22, 45, 38, 45, 47]

Mean epochs : 131.595505618

Max epoch: 1588

Min epoch: 22

Median epochs: 42

=====

For N1 : 10

For alpha: 0.2

For Weight and bias range: -1 1

x0: 0.5

Number of times neural network did not converge : 17

Epochs it converged:

[24, 18, 25, 45, 25, 29, 33, 33, 139, 21, 65, 27, 1739, 384, 199, 84, 41, 30, 104, 416, 116, 29, 26, 24, 264, 27, 62, 23, 24, 1343, 29, 16, 23, 35, 77, 39, 16, 24, 79, 40, 171, 73, 40, 28, 32, 138, 182, 19, 66, 76, 20, 20, 29, 1047, 134, 122, 29, 31, 67, 25, 31, 21, 20, 32, 25, 30, 25, 31, 95, 25, 183, 31, 202, 82, 175, 29, 25, 71, 765, 38, 30, 32, 32]

Mean epochs : 122.602409639

Max epoch: 1739

Min epoch: 16

Median epochs: 32

=====

For N1 : 2

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 23

Epochs it converged:

[325, 272, 360, 349, 309, 304, 294, 440, 312, 351, 564, 318, 284, 407, 321, 358, 360, 362, 274, 368, 326, 334, 352, 403, 379, 313, 285, 357, 374, 490, 362, 318, 411, 312, 297, 311, 427, 346, 269, 372, 479, 257, 319, 450, 289, 396, 487, 389, 330, 360, 328, 407, 378, 446, 259, 332, 371, 364, 327, 333, 303, 330, 372, 329, 292, 367, 355, 424, 305, 342, 410, 288, 375, 341, 319, 443, 365]

Mean epochs : 353.649350649

Max epoch: 564

Min epoch: 257

Median epochs: 349

=====

For N1 : 4

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:



[238, 286, 272, 231, 232, 275, 259, 237, 287, 180, 289, 297, 199, 267, 215, 231, 343, 192, 241, 233, 214, 308, 264, 234, 265, 214, 308, 276, 179, 329, 334, 478, 177, 200, 306, 223, 218, 263, 249, 261, 280, 232, 250, 222, 334, 312, 285, 274, 207, 283, 262, 252, 317, 269, 233, 215, 306, 285, 244, 280, 288, 233, 263, 340, 264, 311, 232, 268, 308, 230, 245, 265, 253, 197, 261, 274, 290, 237, 320, 336, 302, 322, 235, 278, 247, 234, 233, 271, 228, 252, 239, 261, 251, 228, 237, 286, 272, 396, 229, 314]

Mean epochs : 263.76

Max epoch: 478

Min epoch: 177

Median epochs: 261.5

=====

For N1 : 6

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:

[266, 280, 246, 265, 184, 245, 249, 158, 190, 167, 242, 247, 191, 233, 152, 191, 235, 242, 232, 213, 236, 192, 203, 227, 159, 224, 172, 275, 208, 233, 208, 214, 186, 207, 275, 207, 191, 212, 255, 164, 163, 249, 188, 178, 182, 213, 178, 269, 260, 223, 238, 253, 217, 235, 229, 195, 195, 227, 280, 194, 197, 172, 221, 180, 322, 281, 199, 198, 302, 220, 187, 225, 330, 181, 190, 213, 269, 209, 212, 170, 217, 242, 178, 189, 269, 195, 157, 261, 251, 207, 185, 220, 318, 214, 226, 279, 216, 220, 168, 212]

Mean epochs : 219.44

Max epoch: 330

Min epoch: 152

Median epochs: 214.0

=====

For N1 : 8

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 0

Epochs it converged:

[148, 157, 188, 234, 212, 161, 185, 192, 176, 180, 186, 187, 221, 181, 157, 202, 157, 188, 181, 192, 162, 243, 238, 169, 177, 164, 231, 225, 217, 186, 176, 227, 213, 159, 209, 186, 184, 220, 195, 167, 206, 200, 182, 193, 217, 233, 196, 174, 214, 193, 238, 155, 207, 186, 217, 193, 151, 188, 171, 187, 219, 151, 174, 220, 240, 280, 157, 196, 250, 154, 160, 195, 192, 176, 205, 161, 224, 207, 244, 198, 155, 184, 173, 186, 202, 182, 162, 152, 178, 184, 167, 193, 155, 242, 189, 213, 165, 143, 201, 176]

Mean epochs : 191.39

Max epoch: 280

Min epoch: 143

Median epochs: 187.5

=====

For N1 : 10

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1

Number of times neural network did not converge : 1

Epochs it converged:

[147, 160, 169, 157, 150, 136, 170, 180, 190, 203, 159, 184, 161, 171, 159, 149, 165, 141, 185, 132, 165, 172, 184, 171, 171, 185, 178, 163, 165, 177, 191, 171, 163, 174, 170, 168, 140, 142, 166, 181, 203, 147, 159, 161, 159, 153, 175, 169, 194, 167, 151, 148, 164, 163, 171, 165, 152, 179, 153, 203, 178, 180, 1379, 208, 203, 211, 174, 241, 158, 168, 220, 181, 165, 151, 213, 170, 165, 182, 154, 151, 443, 150, 178, 167, 146, 191, 200, 166, 173, 170, 160, 148, 206, 356, 178, 174, 173, 182, 161]

Mean epochs : 187.626262626

Max epoch: 1379

Min epoch: 132

Median epochs: 170

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For N1 : 2

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1.5

Number of times neural network did not converge : 24

Epochs it converged:

[802, 988, 759, 786, 652, 800, 956, 816, 1044, 867, 1303, 843, 677, 1019, 1317, 768, 966, 1043, 1358, 732, 849, 736, 874, 1133, 916, 1028, 854, 1961, 770, 885, 1256, 991, 1002, 848, 885, 1141, 746, 942, 1456, 824, 790, 1842, 1354, 801, 882, 950, 817, 1169, 819, 830, 880, 1921, 928, 865, 1120, 941, 942, 805, 796, 916, 1506, 925, 835, 919, 770, 758, 915, 1071, 1188, 878, 826, 832, 883, 727, 758, 886]

Mean epochs : 968.921052632

Max epoch: 1961

Min epoch: 652

Median epochs: 884.0

=====

For N1 : 4

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[593, 795, 771, 814, 565, 676, 729, 668, 691, 700, 756, 814, 768, 541, 688, 781, 741, 706, 1104, 717, 641, 477, 985, 935, 790, 690, 589, 780, 608, 549, 770, 646, 705, 639, 734, 707, 595, 655, 822, 809, 793, 696, 808, 865, 681, 661, 641, 787, 765, 1108, 1074, 656, 633, 740, 688, 780, 772, 703, 608, 742, 613, 675, 668, 813, 680, 922, 494, 858, 775, 734, 646, 594, 764, 646, 831, 719, 677, 624, 457, 642, 922, 1505, 601, 1921, 665, 473, 809, 840, 865, 767, 717, 718, 559, 736, 624, 610, 607, 556, 468, 798]

Mean epochs : 735.38

Max epoch: 1921

Min epoch: 457

Median epochs: 706.5

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For N1 : 6  
For alpha: 0.2  
For Weight and bias range: -1 1  
x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[596, 686, 529, 522, 812, 414, 646, 580, 622, 430, 696, 565, 609, 650, 555, 613, 636, 786, 714, 730, 689, 395, 609, 635, 562, 616, 557, 712, 595, 637, 729, 613, 819, 781, 565, 732, 698, 672, 665, 443, 587, 625, 571, 642, 606, 468, 571, 601, 625, 511, 441, 616, 572, 542, 847, 829, 613, 637, 572, 429, 698, 506, 420, 694, 697, 783, 580, 564, 554, 671, 596, 554, 535, 778, 528, 542, 477, 595, 681, 698, 558, 669, 748, 555, 605, 601, 492, 520, 649, 466, 483, 591, 554, 494, 654, 538, 630, 514, 589, 637]

Mean epochs : 607.18

Max epoch: 847

Min epoch: 395

Median epochs: 603.0

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For N1 : 8  
For alpha: 0.2  
For Weight and bias range: -1 1  
x0: 1.5  
Number of times neural network did not converge : 0

Epochs it converged:

[606, 626, 639, 483, 507, 633, 663, 615, 536, 447, 597, 516, 509, 671, 450, 364, 771, 565, 684, 557, 480, 584, 712, 522, 456, 487, 612, 631, 404, 492, 582, 509, 572, 609, 463, 525, 609, 448, 602, 590, 580, 561, 542, 534, 700, 402, 533, 680, 625, 481, 572, 460, 588, 484, 648, 546, 603, 533, 569, 448, 509, 394, 493, 756, 459, 591, 513, 839, 403, 591, 551, 471, 593, 430, 560, 638, 532, 680, 441, 613, 567, 809, 493, 573, 442, 445, 511, 821, 435, 520, 537, 433, 672, 474, 536, 498, 434, 574, 598,

514]

Mean epochs : 553.6

Max epoch: 839

Min epoch: 364

Median epochs: 544.0

=====

For N1 : 10

For alpha: 0.2

For Weight and bias range: -1 1

x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[502, 422, 658, 436, 512, 533, 634, 469, 478, 410, 491, 593, 567, 405, 506, 496, 630, 520, 543, 526, 660, 543, 540, 672, 576, 592, 553, 570, 466, 483, 484, 531, 530, 425, 632, 508, 456, 455, 476, 467, 442, 451, 656, 571, 480, 570, 535, 525, 520, 444, 546, 665, 512, 415, 580, 716, 631, 471, 584, 663, 479, 546, 627, 460, 626, 477, 451, 471, 560, 641, 440, 526, 594, 498, 524, 652, 509, 569, 547, 429, 450, 504, 460, 493, 665, 556, 433, 519, 582, 555, 594, 440, 469, 434, 531, 439, 406, 502, 537, 755]

Mean epochs : 528.77

Max epoch: 755

Min epoch: 405

Median epochs: 522.0

=====

For N1 : 2

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 30

Epochs it converged:

[70, 70, 83, 96, 558, 108, 104, 557, 71, 1833, 131, 64, 122, 74, 59, 449, 72, 556, 66, 277, 238, 61, 66, 73, 95, 86, 338, 91, 88, 59, 139, 67, 91, 1564, 132, 51, 1139, 56, 398, 62, 88, 76, 83, 523, 65, 245, 148, 73, 113, 97, 72, 92, 63, 94, 63, 76, 113, 58, 76, 155, 75, 511, 50, 153, 218, 84, 76, 111, 317, 146]

Mean epochs : 206.114285714

Max epoch: 1833

Min epoch: 50

Median epochs: 91.0

=====

For N1 : 4

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 2

Epochs it converged:

[131, 106, 1479, 176, 52, 33, 1876, 239, 58, 40, 45, 74, 45, 38, 46, 57, 36, 42, 90, 92, 37, 246, 53, 157, 32, 62, 37, 27, 483, 76, 58, 81, 273, 28, 45, 76, 60, 53, 35, 45, 36, 38, 140, 37, 36, 54, 40, 48, 212, 56, 42, 1494, 164, 103, 42, 29, 55, 68, 34, 52, 305, 98, 54, 46, 33, 52, 759, 39, 32, 67, 38, 40, 37, 41, 386, 135, 361, 124, 160, 1682, 53, 33, 36, 59, 57, 39, 33, 845, 42, 79, 38, 38, 59, 32, 60, 51, 58, 51]

Mean epochs : 159.704081633

Max epoch: 1876

Min epoch: 27

Median epochs: 53.0

=====

For N1 : 6  
For alpha: 0.2  
For Weight and bias range: -1.5 1.5  
x0: 0.5

Number of times neural network did not converge : 10

Epochs it converged:

[108, 169, 26, 40, 52, 100, 51, 32, 66, 25, 35, 27, 27, 32, 38, 26, 22, 40, 300, 27, 38, 282, 16, 47, 41, 1330, 58, 20, 41, 1814, 60, 1925, 27, 296, 432, 42, 359, 39, 21, 1917, 311, 29, 76, 41, 41, 33, 37, 583, 47, 39, 41, 17, 1152, 113, 33, 379, 22, 31, 27, 22, 23, 34, 29, 13, 217, 97, 36, 31, 830, 48, 71, 6, 28, 25, 1655, 47, 32, 45, 31, 307, 28, 24, 39, 25, 962, 32, 44, 19, 24, 227]

Mean epochs : 201.677777778

Max epoch: 1925

Min epoch: 6

Median epochs: 39.5

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For N1 : 8  
For alpha: 0.2  
For Weight and bias range: -1.5 1.5  
x0: 0.5

Number of times neural network did not converge : 18

Epochs it converged:

[30, 32, 1125, 18, 46, 21, 294, 48, 10, 152, 12, 34, 11, 35, 19, 52, 67, 625, 35, 355, 23, 29, 128, 21, 7, 46, 608, 33, 1986, 209, 544, 99, 19, 24, 26, 15, 1539, 27, 22, 20, 6, 45, 455, 103, 25, 55, 53, 151, 83, 350, 16, 32, 20, 9, 84, 27, 30, 19, 156, 107, 510, 160, 255, 5, 24, 10, 74, 31, 126, 163, 23, 6, 601, 152, 26, 24, 48, 760, 471, 11, 108, 10]

Mean epochs : 169.146341463



Max epoch: 1986

Min epoch: 5

Median epochs: 35.0

=====

For N1 : 10

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 0.5

Number of times neural network did not converge : 35

Epochs it converged:

[6, 17, 37, 916, 39, 14, 236, 144, 4, 63, 57, 10, 30, 6, 101, 6, 207, 239, 265, 20, 124, 49, 47, 91, 528, 146, 155, 18, 135, 53, 320, 6, 28, 35, 21, 54, 75, 92, 94, 8, 19, 757, 8, 432, 108, 95, 302, 14, 32, 36, 47, 60, 33, 38, 465, 1978, 284, 85, 20, 87, 233, 8, 11, 127, 19]

Mean epochs : 150.676923077

Max epoch: 1978

Min epoch: 4

Median epochs: 54

=====

For N1 : 2

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 11

Epochs it converged:

[370, 274, 275, 313, 269, 292, 407, 258, 249, 263, 329, 293, 251, 280, 271, 263, 311, 287, 331, 336, 344, 324, 318, 275, 275, 283, 274, 323, 273, 276, 251, 296, 283, 424, 313, 308, 306, 266, 287, 256, 927, 530, 360, 404, 302, 263, 269, 269, 339, 334, 302, 335, 257, 303, 552, 334, 257, 264, 626,

358, 286, 310, 273, 284, 309, 360, 257, 269, 936, 484, 270, 332, 284, 334, 313, 324, 438, 333, 323, 271, 551, 301, 339, 334, 289, 257, 318, 269, 324]

Mean epochs : 330.719101124

Max epoch: 936

Min epoch: 249

Median epochs: 302

=====

For N1 : 4

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 2

Epochs it converged:

[234, 224, 263, 241, 245, 222, 249, 226, 174, 250, 193, 347, 261, 263, 237, 221, 201, 261, 263, 206, 195, 210, 214, 237, 223, 288, 247, 238, 152, 202, 240, 235, 223, 259, 210, 280, 227, 204, 614, 200, 202, 207, 252, 215, 213, 191, 242, 216, 200, 141, 160, 195, 239, 246, 250, 193, 238, 226, 245, 235, 267, 250, 150, 225, 264, 245, 192, 207, 256, 182, 285, 233, 194, 216, 240, 238, 279, 233, 219, 229, 209, 228, 209, 233, 227, 251, 215, 201, 196, 231, 301, 243, 226, 258, 247, 246, 261, 230]

Mean epochs : 232.663265306

Max epoch: 614

Min epoch: 141

Median epochs: 230.5

=====

For N1 : 6

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 3

Epochs it converged:

[156, 492, 200, 1334, 507, 131, 151, 191, 151, 171, 214, 138, 175, 150, 183, 311, 156, 153, 168, 172, 194, 173, 214, 191, 200, 160, 157, 644, 168, 130, 154, 199, 183, 151, 160, 188, 213, 178, 168, 181, 194, 252, 1556, 157, 187, 198, 207, 138, 208, 180, 179, 222, 294, 163, 293, 133, 183, 151, 261, 193, 152, 191, 130, 216, 141, 142, 366, 185, 181, 210, 169, 160, 217, 185, 181, 188, 155, 347, 175, 198, 164, 191, 139, 178, 154, 145, 189, 176, 200, 151, 140, 196, 157, 149, 190, 174, 201]

Mean epochs : 221.051546392

Max epoch: 1556

Min epoch: 130

Median epochs: 181

=====

For N1 : 8

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 3

Epochs it converged:

[149, 150, 209, 172, 155, 170, 144, 142, 156, 246, 204, 180, 129, 151, 144, 127, 162, 173, 156, 143, 179, 160, 405, 142, 171, 163, 144, 133, 166, 142, 219, 145, 142, 131, 158, 135, 162, 144, 146, 128, 143, 165, 323, 150, 151, 167, 197, 140, 129, 120, 149, 199, 144, 125, 119, 169, 166, 148, 134, 153, 158, 119, 171, 172, 129, 167, 217, 187, 170, 116, 221, 174, 150, 174, 353, 144, 180, 142, 132, 142, 138, 147, 126, 115, 127, 158, 122, 126, 131, 125, 164, 135, 146, 167, 166, 143, 173]

Mean epochs : 160.773195876

Max epoch: 405

Min epoch: 115

Median epochs: 150

=====

For N1 : 10

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 1

Number of times neural network did not converge : 8

Epochs it converged:

[135, 130, 131, 145, 146, 132, 142, 1853, 173, 131, 180, 182, 151, 156, 133, 121, 111, 136, 136, 176, 180, 129, 117, 155, 126, 150, 122, 138, 169, 166, 167, 136, 153, 208, 126, 138, 139, 134, 134, 153, 213, 130, 147, 127, 511, 145, 193, 144, 137, 166, 691, 145, 123, 186, 121, 127, 128, 118, 137, 164, 136, 136, 130, 388, 126, 157, 168, 193, 123, 136, 162, 137, 140, 129, 178, 175, 135, 129, 131, 194, 137, 119, 148, 719, 145, 124, 136, 132, 133, 160, 342, 129]

Mean epochs : 185.0

Max epoch: 1853

Min epoch: 111

Median epochs: 138.0

=====

For N1 : 2

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 1.5

Number of times neural network did not converge : 18

Epochs it converged:

[779, 1025, 654, 722, 1383, 728, 800, 791, 917, 705, 820, 727, 769, 663, 864, 648, 620, 617, 719, 1277, 1178, 600, 1096, 660, 714, 753, 679, 597, 781, 902, 1618, 798, 1992, 815, 893, 673, 586,

748, 910, 724, 1451, 894, 752, 768, 740, 722, 878, 604, 692, 931, 637, 690, 1161, 650, 722, 1019, 743, 707, 1230, 779, 593, 618, 682, 741, 800, 708, 895, 649, 680, 989, 1991, 670, 700, 666, 634, 971, 730, 661, 699, 648, 757, 667]

Mean epochs : 827.609756098

Max epoch: 1992

Min epoch: 586

Median epochs: 735.0

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For N1 : 4  
For alpha: 0.2  
For Weight and bias range: -1.5 1.5  
x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:  
[580, 455, 587, 638, 456, 491, 676, 633, 546, 617, 466, 478, 560, 568, 624, 476, 575, 659, 574, 530, 539, 664, 517, 663, 455, 381, 525, 613, 577, 547, 413, 409, 620, 577, 678, 454, 658, 655, 447, 602, 384, 530, 442, 502, 551, 499, 563, 627, 590, 621, 650, 571, 532, 512, 588, 607, 662, 521, 518, 530, 637, 422, 623, 521, 572, 592, 810, 515, 580, 497, 661, 579, 462, 491, 576, 624, 573, 553, 719, 535, 500, 405, 619, 693, 479, 598, 493, 511, 581, 537, 529, 577, 433, 647, 580, 643, 440, 623, 477, 568]

Mean epochs : 556.58

Max epoch: 810

Min epoch: 381

Median epochs: 568.0

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For N1 : 6

For alpha: 0.2  
For Weight and bias range: -1.5 1.5  
x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[537, 460, 491, 380, 426, 447, 521, 582, 371, 426, 396, 429, 488, 325, 495, 489, 492, 562, 549, 596, 511, 447, 450, 476, 386, 413, 446, 430, 584, 424, 445, 519, 396, 582, 418, 445, 550, 480, 420, 555, 572, 455, 404, 472, 533, 475, 477, 571, 503, 598, 608, 353, 439, 667, 374, 467, 568, 423, 364, 410, 466, 543, 639, 578, 404, 489, 441, 522, 448, 430, 399, 598, 522, 365, 496, 503, 515, 576, 546, 489, 500, 385, 591, 563, 413, 336, 403, 463, 576, 364, 370, 533, 447, 444, 459, 604, 338, 521, 433, 441]

Mean epochs : 477.25

Max epoch: 667

Min epoch: 325

Median epochs: 469.5

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For N1 : 8  
For alpha: 0.2  
For Weight and bias range: -1.5 1.5  
x0: 1.5

Number of times neural network did not converge : 0

Epochs it converged:

[406, 453, 461, 381, 357, 484, 477, 337, 435, 344, 462, 404, 365, 400, 451, 384, 416, 510, 511, 461, 489, 352, 524, 409, 408, 411, 513, 385, 483, 354, 438, 478, 438, 452, 387, 432, 331, 398, 355, 435, 362, 478, 377, 432, 394, 384, 391, 677, 412, 475, 477, 372, 513, 348, 498, 413, 378, 361, 515, 378, 395, 407, 410, 440, 407, 497, 445, 383, 498, 385, 389, 541, 442, 396, 432, 426, 334, 346, 440, 492, 657, 429, 398, 385, 427, 384, 538, 401, 402, 357, 376, 477, 413, 485, 425, 443, 520, 373, 483, 449]

Mean epochs : 429.33

Max epoch: 677

Min epoch: 331

Median epochs: 414.5

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For N1 : 10

For alpha: 0.2

For Weight and bias range: -1.5 1.5

x0: 1.5

Number of times neural network did not converge : 1

Epochs it converged:

[384, 402, 422, 390, 351, 377, 393, 380, 346, 345, 370, 359, 409, 377, 392, 441, 404, 374, 374, 352, 510, 393, 324, 504, 586, 428, 380, 334, 417, 410, 383, 367, 372, 352, 329, 358, 335, 445, 363, 387, 345, 370, 402, 368, 327, 468, 339, 334, 317, 498, 373, 457, 459, 397, 391, 356, 455, 402, 411, 461, 385, 351, 342, 343, 561, 391, 465, 380, 520, 387, 355, 373, 367, 422, 479, 327, 364, 355, 437, 433, 477, 378, 397, 401, 425, 533, 451, 455, 390, 363, 473, 471, 381, 376, 468, 365, 369, 332, 344]

Mean epochs : 398.333333333

Max epoch: 586

Min epoch: 317

Median epochs: 384

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For N1 : 2

For alpha: 0.3

For Weight and bias range: -0.5 0.5

x0: 0.5