

1 Results

1.1 Main Results

1.2 Backward Feature Selection

1.3 Forward Feature Selection

1.4 Weight Analysis

1.5 Jackknife Sensitivity Analysis

model	R2	MSE	R2 std	R2 List:	hidden sizes	total hs	ep
Relu2HiddenLayer	92.1	0.07	6	[83.6, 98.1, 93.6, 98.6, 86.8]	[15, 5]	20	
Tanh2HiddenLayer	90	0.09	4.8	[83.8, 96.7, 94.1, 86.7, 88.6]	[8, 4]	12	
Relu2HiddenLayer	89.6	0.09	9.7	[71.2, 97.5, 97.8, 90.4, 91.3]	[15, 10, 3]	28	
GRNN	88.8	0.1	2.3	[91.5, 87.4, 86.6, 91.8, 87.0]	[15, 10, 3]	28	
Relu2HiddenLayer	87.9	0.11	9.5	[70.8, 86.2, 89.0, 97.1, 96.5]	[15, 10, 3]	28	
Relu2HiddenLayer	87.1	0.11	9.4	[69.4, 85.6, 92.7, 93.5, 94.3]	[15, 5]	20	
GRNN	87	0.11	12.2	[89.5, 90.4, 63.3, 95.5, 96.4]	[8, 4]	12	
Tanh2HiddenLayer	86.5	0.12	9.5	[92.0, 76.4, 93.5, 96.9, 73.9]	[8, 4]	12	
Relu2HiddenLayer	86.3	0.12	8.3	[80.2, 95.9, 82.6, 96.3, 76.4]	[8, 4]	12	
Relu1HiddenLayer	86.2	0.12	7.2	[79.0, 76.3, 93.9, 92.7, 89.1]	[15, 10, 3]	28	
Relu2HiddenLayer	86.2	0.12	14	[61.4, 81.4, 99.0, 98.9, 90.3]	[15, 10, 3]	28	
GRNN	84.4	0.14	11.2	[96.0, 83.9, 97.1, 68.2, 76.6]	[15, 5]	20	
Tanh1HiddenLayer	83.1	0.15	7.3	[85.2, 79.0, 74.8, 96.1, 80.4]	[8, 4]	12	
GRNN	82.8	0.15	15.7	[84.4, 99.1, 53.0, 89.0, 88.7]	[15, 5]	20	
GRNN	82.8	0.15	8.9	[74.8, 86.9, 74.6, 98.1, 79.5]	[8, 4]	12	
Tanh1HiddenLayer	82.5	0.15	11.8	[87.9, 59.0, 85.9, 90.4, 89.4]	[15, 10, 3]	28	
Relu2HiddenLayer	82.4	0.15	19	[89.4, 96.7, 44.9, 92.0, 89.0]	[15, 10, 3]	28	
Relu1HiddenLayer	82.2	0.16	7.5	[84.9, 83.4, 88.0, 87.4, 67.6]	[15, 10, 3]	28	
GRNN	82.1	0.16	14	[57.3, 77.3, 88.1, 97.6, 90.1]	[15, 10, 3]	28	
Relu1HiddenLayer	81.9	0.16	10.5	[94.4, 68.1, 72.6, 92.6, 82.0]	[8, 4]	12	
Relu1HiddenLayer	79.7	0.18	19.3	[93.9, 96.3, 96.2, 57.2, 55.0]	[8, 4]	12	
Tanh2HiddenLayer	78.7	0.19	13.5	[94.7, 57.3, 91.3, 77.6, 72.7]	[15, 5]	20	
Relu1HiddenLayer	78.6	0.19	8.8	[85.3, 74.4, 89.0, 63.9, 80.5]	[15, 10, 3]	28	
GRNN	78.6	0.19	16.4	[81.9, 95.5, 66.2, 95.5, 54.0]	[15, 10, 3]	28	
GRNN	78.2	0.19	18.8	[47.5, 86.6, 98.1, 66.2, 92.6]	[15, 5]	20	
GRNN	78.1	0.19	22.4	[87.1, 95.3, 78.0, 95.0, 35.1]	[8, 4]	12	
Tanh1HiddenLayer	77.8	0.19	16.3	[91.8, 47.6, 91.4, 83.2, 75.2]	[15, 10, 3]	28	
Relu1HiddenLayer	77.5	0.2	13	[93.6, 63.3, 90.4, 77.9, 62.6]	[15, 5]	20	
Relu1HiddenLayer	77.4	0.2	13.3	[57.4, 95.0, 78.7, 87.1, 69.0]	[15, 5]	20	
Relu2HiddenLayer	77.3	0.2	8.6	[91.8, 81.6, 67.3, 73.9, 71.9]	[8, 4]	12	
Relu1HiddenLayer	77.1	0.2	10.4	[76.0, 79.7, 58.1, 88.3, 83.6]	[15, 5]	20	
GRNN	76.9	0.2	12.4	[83.2, 65.2, 63.9, 75.0, 97.2]	[15, 10, 3]	28	
Tanh2HiddenLayer	76.9	0.2	14.8	[50.6, 77.9, 93.7, 87.4, 75.2]	[15, 10, 3]	28	
GRNN	76.6	0.2	11.9	[92.8, 63.1, 76.1, 64.2, 86.9]	[15, 5]	20	
Tanh1HiddenLayer	76.4	0.21	15.3	[75.1, 86.2, 47.6, 91.5, 81.4]	[15, 10, 3]	28	
Relu1HiddenLayer	76.3	0.21	8.3	[82.4, 76.5, 71.1, 87.5, 64.0]	[8, 4]	12	
Tanh1HiddenLayer	76	0.21	9.3	[76.0, 75.5, 59.4, 87.0, 81.9]	[8, 4]	12	
Relu1HiddenLayer	75.5	0.21	25.9	[80.1, 89.3, 24.4, 91.1, 92.5]	[15, 10, 3]	28	
Tanh2HiddenLayer	75	0.22	27.6	[98.7, 97.7, 96.3, 39.2, 43.2]	[8, 4]	12	
GRNN	73.9	0.23	7.8	[74.1, 86.9, 65.2, 66.6, 76.5]	[8, 4]	12	
Tanh1HiddenLayer	73.6	0.23	14.3	[82.2, 57.9, 92.0, 55.8, 80.3]	[15, 5]	20	
FFNN	72.5	0.24	0.4	[72.8, 71.9, 72.2, 72.7, 73.0]	[15, 10, 3]	28	
Tanh2HiddenLayer	72.4	0.24	26.5	[89.3, 84.4, 21.0, 93.2, 73.9]	[15, 10, 3]	28	
Relu2HiddenLayer	72	0.24	18.1	[97.2, 72.7, 42.0, 81.1, 67.1]	[8, 4]	12	
Relu2HiddenLayer	71.5	0.25	22.6	[82.5, 85.9, 81.7, 80.9, 26.5]	[15, 5]	20	
Tanh1HiddenLayer	71.2	0.25	21.6	[34.2, 71.7, 64.9, 93.5, 91.8]	[15, 5]	20	
Tanh1HiddenLayer	69.8	0.26	22.1	[45.9, 42.8, 73.6, 95.4, 91.4]	[8, 4]	12	
Tanh2HiddenLayer	68.8	0.27	11.8	[68.2, 85.1, 52.6, 60.1, 78.1]	[8, 4]	12	
FFNN	68.4	0.28	3.4	[71.8, 67.9, 63.9, 72.6, 65.8]	[15, 10, 3]	28	
Relu1HiddenLayer	68.1	0.28	21	[85.3, 85.5, 36.7, 48.8, 84.0]	[15, 5]	20	
Relu1HiddenLayer	66.4	0.29	39.6	[81.3, 92.7, 90.4, 79.6, -12.1]	[8, 4]	12	
Tanh1HiddenLayer	65.6	0.3	24.3	[91.8, 81.2, 29.3, 44.2, 81.7]	[15, 5]	20	
Tanh1HiddenLayer	65	0.31	31.7	[90.0, 54.3, 84.6, 7.3, 88.9]	[8, 4]	12	
FFNN	65	0.31	7.3	[69.7, 73.0, 51.9, 67.3, 63.3]	[15, 10, 3]	28	
Tanh1HiddenLayer	64.8	0.31	23.6	[20.0, 69.6, 79.1, 66.9, 88.4]	[15, 5]	20	
Relu2HiddenLayer	64.5	0.31	23.8	[71.7, 77.1, 17.2, 79.3, 77.4]	[8, 4]	12	
FFNN	63.7	0.32	7.2	[65.4, 59.7, 71.0, 70.5, 52.0]	[15, 10, 3]	28	
Tanh2HiddenLayer	63.3	0.32	31.8	[92.2, 73.7, 2.6, 84.2, 63.9]	[15, 5]	20	
FFNN	61.9	0.33	8.8	[46.8, 72.3, 61.2, 68.9, 60.2]	[8, 4]	12	