

		Results: 30, Model: NN = 7, NN/TN = 23					
	Parameters						
	NN Dense Layers	Loss	Time	NN/TN TNLayers	Loss	Time	
	1x	7.20E-03	3.940	1x	1.72E-06	6.522	
	2x	7.69E-04	9.629	2x	3.99E-07	9.429	
original	3x	7.12E-05	12.881	<u>3x</u>	<u>1.93E-07</u>	11.292	
	4x	4.44E-05	16.306	4x	3.78E-05	13.236	Max TNLayers
	5x	4.00E-05	21.402	5x	1.00E+00	13.047	
	<u>6x</u>	<u>6.96E-06</u>	22.523	6x	1.00E+00	15.318	
		Avg. Loss	Avg. Time		Avg. Loss	Avg. Time	
		1.36E-03	14.447		3.33E-01	11.474	
		Std Dev Loss	Std Dev Time		Std Dev Loss	Std Dev Time	
		2.88E-03	7.115		5.16E-01	3.133	
		Min Loss			Min Loss		
		6.96E-06			1.93E-07		
	Parameters						
	NN Neurons	Loss	Time	NN/TN Neurons	Loss	Time	
	784	2.40E-03	11.124	784	1.05E-06	7.974	
	841	7.35E-05	7.992	841	7.31E-07	8.259	
	900	1.40E-03	7.948	900	2.03E-07	12.842	
	961	1.40E-03	8.424	961	7.49E-07	8.162	
original	1024	7.69E-04	9.110	1024	1.93E-07	8.358	
	1089	4.45E-04	9.419	1089	2.96E-07	8.804	
	1156	5.50E-03	9.857	1156	1.75E-07	12.881	
	1225	9.94E-04	11.375	1225	1.87E-07	9.318	
	<u>1296</u>	<u>2.54E-05</u>	10.526	<u>1296</u>	<u>1.53E-07</u>	8.930	
	1444	8.30E-03	12.478	1444	2.74E-07	9.366	
		Avg. Loss	Avg. Time		Avg. Loss	Avg. Time	
		2.13E-03	9.825		4.02E-07	9.489	
		Std Dev Loss	Std Dev Time		Std Dev Loss	Std Dev Time	
		2.69E-03	1.533		3.20E-07	1.839	
		Min Loss			Min Loss		
		2.54E-05			1.53E-07		
	Hyperparameters						
	NN lr/wd	Loss	Time	NN/TN lr/wd	Loss	Time	
	0.0001	9.70E-03	9.393	0.0001	3.80E-03	9.676	
	0.0008	3.00E-03	8.987	0.0008	8.00E-07	9.327	
	0.0009	1.50E-03	8.857	0.0009	5.19E-07	9.228	
original	0.0010	7.69E-04	9.658	<u>0.0010</u>	<u>1.93E-07</u>	9.440	
	0.0011	3.11E-04	9.027	0.0011	5.21E-07	12.982	
	<u>0.0012</u>	<u>1.59E-05</u>	8.998	0.0012	2.90E-07	9.031	
	0.0014	4.20E-03	9.118	0.0014	3.99E-07	8.990	
	0.0100	1.65E-04	9.648	0.0100	4.05E-07	12.978	Max TNLayer LR
	0.1000	1.64E-01	9.272	0.1000	1.02E+00	8.988	
	.001/.00001	7.69E-04	9.959	.001/.00001	1.93E-07	9.443	
	.001/.0001	7.34E-04	9.750	.001/.0001	1.93E-07	9.581	
	.001/.001	3.00E-03	10.001	.001/.001	2.06E-07	13.155	
	.001/.01	1.70E-05	13.917	.001/.01	2.33E-07	12.064	
	.001/.1	9.20E-04	11.244	.001/.1	1.59E-06	10.147	
		Avg. Loss	Avg. Time		Avg. Loss	Avg. Time	
		1.35E-02	9.845		7.33E-02	10.359	
		Std Dev Loss	Std Dev Time		Std Dev Loss	Std Dev Time	
		4.35E-02	1.325		2.73E-01	1.644	
		Min Loss			Min Loss		
		1.59E-05			1.93E-07		

	Hyperparameters						
	NN Batch size	Loss	Time	NN/TN Batch size	Loss	Time	
	8	3.07E-04	20.489	8	9.84E-06	12.526	
	16	1.82E-04	11.601	<u>16</u>	<u>1.60E-07</u>	12.511	
	24	8.51E-05	10.648	24	2.69E-07	9.681	
original	32	7.69E-04	9.049	32	1.93E-07	8.637	
	40	1.44E-04	6.966	40	2.09E-05	7.800	
	<u>48</u>	<u>1.67E-05</u>	7.057	48	3.99E-06	7.969	
		Avg. Loss	Avg. Time		Avg. Loss	Avg. Time	
		2.51E-04	10.968		5.90E-06	9.854	
		Std Dev Loss	Std Dev Time		Std Dev Loss	Std Dev Time	
		2.72E-04	5.023		8.28E-06	2.167	
		Min Loss			Min Loss		
		1.67E-05			1.60E-07		
	Hyperparameters						
	NN Epochs	Loss	Time	NN/TN Epochs	Loss	Time	
	100	5.70E-03	3.722	100	8.57E-04	4.980	
	200	6.82E-05	7.088	200	2.23E-06	6.956	
original	300	7.69E-04	9.388	300	1.93E-07	9.310	
	400	4.56E-05	12.865	400	7.76E-08	12.994	
	500	3.79E-05	14.678	500	5.04E-08	13.314	
	600	9.13E-06	17.271	<u>600</u>	<u>2.73E-08</u>	15.364	
	<u>10000</u>	<u>2.72E-06</u>	276.249	10000	3.54E-08	220.814	
		Avg. Loss	Avg. Time		Avg. Loss	Avg. Time	
		9.47E-04	48.752		1.23E-04	40.533	
		Std Dev Loss	Std Dev Time		Std Dev Loss	Std Dev Time	
		2.11E-03	100.422		3.24E-04	79.583	
		Min Loss			Min Loss		
		2.72E-06			2.73E-08		
	Inputs						
	NN Dataset size	Loss	Time	NN/TN Dataset size	Loss	Time	
original	80	7.69E-04	9.841	80	1.93E-07	9.654	
	<u>160</u>	<u>1.25E-05</u>	13.466	<u>160</u>	<u>1.21E-07</u>	11.343	
	240	1.72E-05	19.862	240	4.77E-06	17.027	
	320	2.40E-03	24.464	320	7.66E-06	18.191	
	400	9.00E-03	31.410	400	6.90E-03	25.835	
	480	1.73E-05	36.045	480	6.44E-07	25.478	
		Avg. Loss	Avg. Time		Avg. Loss	Avg. Time	
		2.04E-03	22.515		1.15E-03	17.921	
		Std Dev Loss	Std Dev Time		Std Dev Loss	Std Dev Time	
		3.54E-03	10.154		2.82E-03	6.815	
		Min Loss			Min Loss		
		1.25E-05			1.21E-07		
	Tuesday, March 12th 2024						
	Kawchak, K., CEO ChemicalQDevice						