

TABLE I
THE SIGNIFICANT DIFFERENCE OF 1-L CNN AND OTHERS MODELS IN INDEPENDENT-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	2-L CNN	0.009091	0.005857	0.013213	0.005889	0.005889	0.005761	0.005857
	1-L BiLSTM	0.078948	0.587746	0.017229	0.014179	0.108319	0.292436	0.050243
	2-L BiLSTM	0.681122	0.005729	0.008610	0.005857	0.009091	0.137948	0.033966
	1-L Attn BiLSTM	0.512815	0.017378	0.017229	0.009152	0.037645	0.041056	0.181276
	2-L Attn BiLSTM	0.231581	0.006927	0.017622	0.016535	0.005793	0.039557	0.080731

TABLE II
THE SIGNIFICANT DIFFERENCE OF 2-L CNN AND OTHERS MODELS IN INDEPENDENT-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN	0.009091	0.007914	0.013213	0.005890	0.005761	0.005761	0.005857
	1-L BiLSTM	0.009152	0.028774	0.244918	0.005889	0.140506	0.005825	0.005857
	2-L BiLSTM	0.005889	0.024728	0.280888	0.059006	0.096908	0.005264	0.005857
	1-L Attn BiLSTM	0.005857	0.604907	1	0.012693	0.031642	0.005572	0.009206
	2-L Attn BiLSTM	0.005761	0.603151	0.181665	0.024557	0.019659	0.005889	0.005889

TABLE III
THE SIGNIFICANT DIFFERENCE OF 1-L BiLSTM AND OTHERS MODELS IN INDEPENDENT-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN	0.078948	0.587746	0.017229	0.014179	0.108319	0.292436	0.050242
	2-L CNN	0.009152	0.028774	0.244918	0.005889	0.140506	0.005825	0.005857
	2-L BiLSTM	0.153042	0.005541	0.472212	0.943907	0.721108	0.622783	0.550533
	1-L Attn BiLSTM	0.506795	0.009921	0.261519	0.918549	0.888366	0.310088	0.878246
	2-L Attn BiLSTM	0.014714	0.005144	0.175834	0.442505	0.878325	0.339841	0.720055

TABLE IV
THE SIGNIFICANT DIFFERENCE OF 2-L BiLSTM AND OTHERS MODELS IN INDEPENDENT-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN	0.681122	0.005729	0.008610	0.005857	0.009091	0.137948	0.033966
	2-L CNN	0.005889	0.024728	0.280888	0.059006	0.096908	0.005264	0.005857
	1-L BiLSTM	0.153042	0.005541	0.472212	0.943907	0.721108	0.622783	0.550533
	1-L Attn BiLSTM	0.474671	0.066362	0.228749	1	0.959274	1	0.888502
	2-L Attn BiLSTM	0.442804	0.104529	0.044158	0.878009	0.878009	0.442804	1

TABLE V
THE SIGNIFICANT DIFFERENCE OF 1-L ATTN BiLSTM AND OTHERS MODELS IN INDEPENDENT-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN	0.512815	0.017378	0.004263	0.009152	0.037645	0.041056	0.181276
	2-L CNN	0.005857	0.604907	1.000000	0.012694	0.031642	0.005572	0.009207
	1-L BiLSTM	0.506795	0.009922	0.261519	0.918549	0.888366	0.310088	0.878246
	2-L BiLSTM	0.474671	0.066362	0.228749	1.000000	0.959274	1.000000	0.888502
	2-L Attn BiLSTM	0.122546	1.000000	0.304642	0.679318	1.000000	0.796987	0.918496

TABLE VI
THE SIGNIFICANT DIFFERENCE OF 2-L ATTN BiLSTM AND OTHERS MODELS IN INDEPENDENT-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN	0.231581	0.006927	0.017622	0.016535	0.005793	0.039557	0.080731
	2-L CNN	0.005761	0.603151	0.181665	0.024557	0.019659	0.005889	0.005889
	1-L BiLSTM	0.014714	0.005144	0.175834	0.442505	0.878325	0.339841	0.720055
	2-L BiLSTM	0.442804	0.104529	0.044158	0.878009	0.878009	0.442804	1
	1-L Attn BiLSTM	0.122546	1.000000	0.304642	0.679318	1.000000	0.796987	0.918496

TABLE VII
THE SIGNIFICANT DIFFERENCE OF 1-L ATTN BiLSTM AND OTHERS MODELS IN MULTI-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN	0.005889	0.005729	0.005889	0.005761	0.005889	0.005857	0.0058571
	2-L CNN	0.005889	0.005889	0.001953	0.001953	0.001953	0.001953	0.0019531
	1-L BiLSTM	0.008004	1.000000	0.005857	0.010776	0.574814	0.482765	0.0205503
	2-L BiLSTM	0.096908	0.831380	0.005889	0.009152	0.634991	0.719349	0.1342493
	2-L Attn BiLSTM	0.028124	0.340803	0.718955	0.023999	0.918496	0.098677	0.3482017

TABLE VIII
THE SIGNIFICANT DIFFERENCE OF SHALLOW VS DEEP NETWORKS IN MULTI-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN vs 2-L CNN	0.005889	0.005889	0.001953	0.001953	0.005857	0.001953	0.0019531
	1-L BiLSTM vs 2-L BiLSTM	0.682701	1	0.092389	0.358639	0.247561	0.959301	0.2816728
	1-L Attn BiLSTM vs 2-L Attn BiLSTM	0.028124	0.340803	0.718954	0.023999	0.918496	0.098676	0.3482017

TABLE IX
THE SIGNIFICANT DIFFERENCE BETWEEN MODELS WITH ATTENTION AND WITHOUT ATTENTION IN MULTI-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L BiLSTM vs 1-L Attn BiLSTM	0.008004	1	0.005857	0.010776	0.574814	0.482765	0.0205503
	2-L BiLSTM vs 2-L Attn BiLSTM	0.024651	0.773688	0.001953	0.016464	0.621921	0.918602	0.4738047

TABLE X
THE SIGNIFICANT DIFFERENCE BETWEEN MULTI-TASK LEARNING AND INDEPENDENT-TASK LEARNING

		Severity	Attack	Authentication	Access	Availability	Confidentiality	Integrity
pValue	1-L CNN	0.005761	0.216739	0.005825	0.005761	0.001953	0.005825	0.005889
	2-L CNN	0.005761	0.001953	0.001953	0.005889	0.019659	0.019659	0.019659
	1-L BiLSTM	0.005889	0.005234	0.014179	0.046711	0.005889	0.005793	0.005857
	2-L BiLSTM	0.005889	0.005793	0.375	0.878009	0.005761	0.001953	0.005761
	1-L Attn BiLSTM	0.005793	0.005234	0.005233	0.005857	0.005889	0.005571	0.005761
	2-L Attn BiLSTM	0.005857	0.005509	0.040699	0.005857	0.001953	0.005793	0.005825