

# Results

May 8, 2024

## 1 Tables of Friedman, Bonferroni-Dunn, Holm, Hochberg and Hommel Tests

Table 1: Average Rankings of the algorithms

Algorithm	Ranking
LWRK	2.17
MS	3.48
SPT	1.35
WINQ	3.71
—Flexible-DDQN—Complete-model-0	6.90
—Flexible-DDQN—Complete-model-1	7.65
—Flexible-DDQN—Complete-model-2	10.07
—Flexible-DDQN—Complete-model-3	9.68
—Flexible-DDQN—MachineCompressed-model-4	8.67
—Flexible-DDQN—MachineCompressed-model-5	8.48
—Flexible-DDQN—MachineCompressed-model-6	10.96
—Flexible-DDQN—MachineCompressed-model-7	4.86

Friedman statistic considering reduction performance (distributed according to chi-square with 11 degrees of freedom: 2716.8784615384407.  
P-value computed by Friedman Test: 0.0.

Iman and Davenport statistic considering reduction performance (distributed according to F-distribution with 11 and 3289 degrees of freedom: 1393.1000767750675.  
P-value computed by Iman and Daveport Test: 0.0.

Table 2: Holm / Hochberg Table for  $\alpha = 0.05$

$i$	algorithm	$z = (R_0 - R_i) / SE$	$p$	Holm/Hochberg/Hommel
11	—Flexible-DDQN—MachineCompressed-model-6	32.64354689438863	9.894312011186747E-234	0.004545454545454546
10	—Flexible-DDQN—Complete-model-2	29.631689983564083	5.839387309438644E-193	0.005
9	—Flexible-DDQN—Complete-model-3	28.295603083273445	3.91437840399833E-176	0.005555555555555556
8	—Flexible-DDQN—MachineCompressed-model-4	24.876126440156764	1.3490894692848313E-136	0.00625
7	—Flexible-DDQN—MachineCompressed-model-5	24.23072853069432	1.0557648328842728E-129	0.0071428571428571435
6	—Flexible-DDQN—Complete-model-1	21.40003594533286	1.3350508906873948E-101	0.008333333333333333
5	—Flexible-DDQN—Complete-model-0	18.863735388848887	2.2662862869193515E-79	0.01
4	—Flexible-DDQN—MachineCompressed-model-7	11.92287716954255	8.994765142661213E-33	0.0125
3	WINQ	8.016521401743686	1.087819784864503E-15	0.016666666666666666
2	MS	7.246573018525375	4.2744878131863167E-13	0.025
1	LWRK	2.7967242743371474	0.005162356812227744	0.05

Bonferroni-Dunn's procedure rejects those hypotheses that have a p-value  $\leq 0.004545454545454546$ .  
Hochberg's procedure rejects those hypotheses that have a p-value  $\leq 0.05$ .  
Hommel's procedure rejects all hypotheses.

Table 3: Holm / Hochberg Table for  $\alpha = 0.10$ 

$i$	algorithm	$z = (R_0 - R_i)/SE$	$p$	Holm/Hochberg/Hommel
11	—Flexible-DDQN—MachineCompressed-model-6	32.64354689438863	9.894312011186747E-234	0.009090909090909092
10	—Flexible-DDQN—Complete-model-2	29.631689983564083	5.839387309438644E-193	0.01
9	—Flexible-DDQN—Complete-model-3	28.295603083273445	3.91437840399833E-176	0.011111111111111112
8	—Flexible-DDQN—MachineCompressed-model-4	24.876126440156764	1.3490894692848313E-136	0.0125
7	—Flexible-DDQN—MachineCompressed-model-5	24.23072853069432	1.0557648328842728E-129	0.014285714285714287
6	—Flexible-DDQN—Complete-model-1	21.40003594533286	1.3350508906873948E-101	0.016666666666666666
5	—Flexible-DDQN—Complete-model-0	18.863735388848887	2.2662862869193515E-79	0.02
4	—Flexible-DDQN—MachineCompressed-model-7	11.92287716954255	8.994765142661213E-33	0.025
3	WINQ	8.016521401743686	1.087819784864503E-15	0.033333333333333333
2	MS	7.246573018525375	4.2744878131863167E-13	0.05
1	LWRK	2.7967242743371474	0.005162356812227744	0.1

Bonferroni-Dunn’s procedure rejects those hypotheses that have a p-value  $\leq 0.009090909090909092$ .

Hochberg’s procedure rejects those hypotheses that have a p-value  $\leq 0.1$ .

Hommel’s procedure rejects all hypotheses.

Table 4: Adjusted  $p$ -values

$i$	algorithm	unadjusted $p$	$p_{Bonf}$	$p_{Holm}$	$p_{Hoch}$	$p_{Homm}$
1	—Flexible-DDQN—MachineCompressed-model-6	9.894312011186747E-234	1.0883743212305422E-232	1.0883743212305422E-232	1.0883743212305422E-232	1.0883743212305422E-232
2	—Flexible-DDQN—Complete-model-2	5.839387309438644E-193	6.423326040382509E-192	5.839387309438644E-192	5.839387309438644E-192	5.839387309438644E-192
3	—Flexible-DDQN—Complete-model-3	3.91437840399833E-176	4.305816244398163E-175	3.522940563598497E-175	3.522940563598497E-175	3.522940563598497E-175
4	—Flexible-DDQN—MachineCompressed-model-4	1.3490894692848313E-136	1.4839984162133144E-135	1.0792715754278651E-135	1.0792715754278651E-135	1.0792715754278651E-135
5	—Flexible-DDQN—MachineCompressed-model-5	1.0557648328842728E-129	1.1613413161727E-128	7.39035383018991E-129	7.39035383018991E-129	7.39035383018991E-129
6	—Flexible-DDQN—Complete-model-1	1.3350508906873948E-101	1.4685559797561343E-100	8.010305344124369E-101	8.010305344124369E-101	8.010305344124369E-101
7	—Flexible-DDQN—Complete-model-0	2.2662862869193515E-79	2.4929149156112865E-78	1.1331431434596758E-78	1.1331431434596758E-78	1.1331431434596758E-78
8	—Flexible-DDQN—MachineCompressed-model-7	8.994765142661213E-33	9.894241656927334E-32	3.5979060570644854E-32	3.5979060570644854E-32	3.5979060570644854E-32
9	WINQ	1.087819784864503E-15	1.1966017633509532E-14	3.2634593545935088E-15	3.2634593545935088E-15	3.2634593545935088E-15
10	MS	4.2744878131863167E-13	4.7019365945049484E-12	8.548975626372633E-13	8.548975626372633E-13	8.548975626372633E-13
11	LWRK	0.005162356812227744	0.05678592493450518	0.005162356812227744	0.005162356812227744	0.005162356812227744

Nemenyi’s procedure rejects those hypotheses that have a p-value  $\leq 7.575757575757576E - 4$ .

Holm’s procedure rejects those hypotheses that have a p-value  $\leq 0.016666666666666666$ .

Shaffer’s procedure rejects those hypotheses that have a p-value  $\leq 7.575757575757576E - 4$ .

Nemenyi’s procedure rejects those hypotheses that have a p-value  $\leq 0.0015151515151515152$ .

Holm’s procedure rejects those hypotheses that have a p-value  $\leq 0.033333333333333333$ .

Shaffer’s procedure rejects those hypotheses that have a p-value  $\leq 0.0015151515151515152$ .

Table 5: Holm / Shaffer Table for  $\alpha = 0.05$ 

$i$	algorithms	$z = (R_0 - R_i)/SE$	$p$	Holm	Shaffer
66	SPT vs. —Flexible-DDQN—MachineCompressed-model-6	32.64354689438863	9.894312011186747E-234	7.575757575757576E-4	7.575757575757576E-4
65	LWRK vs. —Flexible-DDQN—MachineCompressed-model-6	29.846822620051476	9.653097191822004E-196	7.692307692307692E-4	9.090909090909091E-4
64	SPT vs. —Flexible-DDQN—Complete-model-2	29.631689983564083	5.839387309438644E-193	7.8125E-4	9.090909090909091E-4
63	SPT vs. —Flexible-DDQN—Complete-model-3	28.295603083273445	3.91437840399833E-176	7.936507936507937E-4	9.090909090909091E-4
62	LWRK vs. —Flexible-DDQN—Complete-model-2	26.834965709226935	1.2634820319193417E-158	8.064516129032258E-4	9.090909090909091E-4
61	LWRK vs. —Flexible-DDQN—Complete-model-3	25.498878808936297	2.028507031767105E-143	8.19672131147541E-4	9.090909090909091E-4
60	MS vs. —Flexible-DDQN—MachineCompressed-model-6	25.39697387586325	2.723659525585741E-142	8.333333333333334E-4	9.090909090909091E-4
59	SPT vs. —Flexible-DDQN—MachineCompressed-model-4	24.876126440156764	1.3490894692848313E-136	8.474576271186442E-4	9.090909090909091E-4
58	WINQ vs. —Flexible-DDQN—MachineCompressed-model-6	24.62702549264494	6.487856993552961E-134	8.620689655172415E-4	9.090909090909091E-4
57	SPT vs. —Flexible-DDQN—MachineCompressed-model-5	24.23072853069432	1.0557648328842728E-129	8.771929824561404E-4	9.090909090909091E-4
56	MS vs. —Flexible-DDQN—Complete-model-2	22.385116965038712	5.496112959143124E-111	8.928571428571429E-4	9.090909090909091E-4
55	LWRK vs. —Flexible-DDQN—MachineCompressed-model-4	22.079402165819616	4.9863923777841605E-108	9.090909090909091E-4	9.090909090909091E-4
54	WINQ vs. —Flexible-DDQN—Complete-model-2	21.6151685818204	1.293294051199028E-103	9.25925925925926E-4	0.0010869565217391304
53	LWRK vs. —Flexible-DDQN—MachineCompressed-model-5	21.434004256357174	6.439657160147765E-102	9.433962264150943E-4	0.0010869565217391304
52	SPT vs. —Flexible-DDQN—Complete-model-1	21.40003594533286	1.3350508906873948E-101	9.615384615384616E-4	0.0010869565217391304
51	MS vs. —Flexible-DDQN—Complete-model-3	21.04903006474807	2.3340746561245752E-98	9.80392156862745E-4	0.0010869565217391304
50	—Flexible-DDQN—MachineCompressed-model-6 vs. —Flexible-DDQN—MachineCompressed-model-7	20.726669724846076	2.255266403391616E-95	0.001	0.0010869565217391304
49	WINQ vs. —Flexible-DDQN—Complete-model-3	20.27908168152976	1.9677056825567682E-91	0.0010204081632653062	0.0010869565217391304
48	SPT vs. —Flexible-DDQN—Complete-model-0	18.863735388848887	2.2662862869193515E-79	0.0010416666666666667	0.0010869565217391304
47	LWRK vs. —Flexible-DDQN—Complete-model-1	18.603311670995712	3.020582624140367E-77	0.0010638297872340426	0.0010869565217391304
46	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-7	17.708812814021535	3.585555365810654E-70	0.0010869565217391304	0.0010869565217391304
45	MS vs. —Flexible-DDQN—MachineCompressed-model-4	17.62955342163139	1.4611655849383949E-69	0.0011111111111111111	0.0011111111111111111
44	MS vs. —Flexible-DDQN—MachineCompressed-model-5	16.984155512168947	1.0759105902148033E-64	0.0011363636363636365	0.001282051282051282
43	WINQ vs. —Flexible-DDQN—MachineCompressed-model-4	16.859605038413076	8.918300390117836E-64	0.0011627906976744186	0.001282051282051282
42	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-7	16.372725913730896	2.9949398604809674E-60	0.0011904761904761906	0.001282051282051282
41	WINQ vs. —Flexible-DDQN—MachineCompressed-model-5	16.214207128950633	4.002089789480749E-59	0.0012195121951219512	0.001282051282051282
40	LWRK vs. —Flexible-DDQN—Complete-model-0	16.06701111451174	4.3453915764994065E-58	0.00125	0.001282051282051282
39	MS vs. —Flexible-DDQN—Complete-model-1	14.153462926807487	1.7778253712739136E-45	0.001282051282051282	0.001282051282051282
38	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-6	13.779811505539739	3.371513321603013E-43	0.0013157894736842105	0.0013513513513513514
37	WINQ vs. —Flexible-DDQN—Complete-model-1	13.383514543589172	7.549157432382833E-41	0.0013513513513513514	0.0013513513513513514
36	—Flexible-DDQN—MachineCompressed-model-4 vs. —Flexible-DDQN—MachineCompressed-model-7	12.953249270614215	2.2521572385712132E-38	0.0013888888888888889	0.0013888888888888889
35	—Flexible-DDQN—MachineCompressed-model-5 vs. —Flexible-DDQN—MachineCompressed-model-7	12.307851361151773	8.218199289835289E-35	0.0014285714285714286	0.0014705882352941176
34	SPT vs. —Flexible-DDQN—MachineCompressed-model-7	11.92287716954255	8.994765142661213E-33	0.0014705882352941176	0.0014705882352941176
33	MS vs. —Flexible-DDQN—Complete-model-0	11.617162370323513	3.371490877716214E-31	0.0015151515151515152	0.0016129032258064516
32	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-6	11.243510949055764	2.4926745456758978E-29	0.0015625	0.0016129032258064516
31	WINQ vs. —Flexible-DDQN—Complete-model-0	10.847213987105198	2.0559679557372043E-27	0.0016129032258064516	0.0016129032258064516
30	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—Complete-model-2	10.767954594715198	4.877157280712038E-27	0.0016666666666666668	0.0016666666666666668
29	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-7	9.477158775790311	2.6130081560703538E-21	0.001724137931034483	0.001724137931034483
28	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—Complete-model-3	9.43186769442456	4.028507767826899E-21	0.0017857142857142859	0.0017857142857142859
27	LWRK vs. —Flexible-DDQN—MachineCompressed-model-7	9.1261528952054	7.097672536721669E-20	0.001851851851851852	0.001851851851851852
26	—Flexible-DDQN—MachineCompressed-model-5 vs. —Flexible-DDQN—MachineCompressed-model-6	8.412818363694303	4.002745525339804E-17	0.0019230769230769232	0.002
25	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—Complete-model-2	8.231654038231223	1.8464588256051624E-16	0.002	0.002
24	SPT vs. WINQ	8.016521401743686	1.087819784864503E-15	0.0020833333333333333	0.0020833333333333333
23	—Flexible-DDQN—MachineCompressed-model-4 vs. —Flexible-DDQN—MachineCompressed-model-6	7.7674204542318614	8.010060951056268E-15	0.002173913043478261	0.002173913043478261
22	MS vs. SPT	7.246573018525375	4.2744878131863167E-13	0.002272727272727273	0.002272727272727273
21	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-7	6.940858219306337	3.897250025255635E-12	0.002380952380952381	0.002380952380952381
20	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—Complete-model-3	6.895567137940586	5.36503279103777E-12	0.0025	0.0025
19	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-4	6.012391051307877	1.828066890205121E-9	0.002631578947368421	0.002631578947368421
18	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-5	5.400961452869764	6.628466939965962E-8	0.0027777777777777778	0.0027777777777777778
17	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-5	5.366993141845435	8.006009974552906E-8	0.0029411764705882353	0.0029411764705882353
16	LWRK vs. WINQ	5.219797127406541	1.791192311678173E-7	0.003125	0.003125
15	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-4	4.75563543407321	1.9789360052980458E-6	0.0033333333333333335	0.0033333333333333335
14	MS vs. —Flexible-DDQN—MachineCompressed-model-7	4.676304151017175	2.9209129269720545E-6	0.0035714285714285718	0.0035714285714285718
13	LWRK vs. MS	4.449848744188227	8.593078726633564E-6	0.0038461538461538464	0.0038461538461538464
12	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-6	4.3479438111151785	1.3741979701959572E-5	0.0041666666666666667	0.0041666666666666667
11	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-5	4.064874552579124	4.8058303779778235E-5	0.0045454545454545456	0.0045454545454545456
10	WINQ vs. —Flexible-DDQN—MachineCompressed-model-7	3.906355767798861	9.36985285211739E-5	0.005	0.005
9	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-4	3.476090494823903	5.087805753050387E-4	0.005555555555555556	0.005555555555555556
8	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-4	3.4194766431166825	6.274171861465427E-4	0.00625	0.00625
7	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-6	3.01185691082454	0.0025965496031887317	0.0071428571428571435	0.0071428571428571435
6	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-5	2.830692585361461	0.00464473394229294	0.0083333333333333333	0.0083333333333333333
5	LWRK vs. SPT	2.7967242743371474	0.005162356812227744	0.01	0.01
4	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—Complete-model-1	2.5363005564839742	0.011203053689111592	0.0125	0.0125
3	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—Complete-model-3	1.3360869002906386	0.18152087117927868	0.016666666666666666	0.016666666666666666
2	MS vs. WINQ	0.7699483832183142	0.4413305118271947	0.025	0.025
1	—Flexible-DDQN—MachineCompressed-model-4 vs. —Flexible-DDQN—MachineCompressed-model-5	0.645397909462442	0.5186693578126694	0.05	0.05

Table 6: Holm / Shaffer Table for  $\alpha = 0.10$ 

$i$	algorithms	$z = (R_0 - R_i)/SE$	$p$	Holm	Shaffer
66	SPT vs. —Flexible-DDQN—MachineCompressed-model-6	32.64354689438863	9.894312011186747E-234	0.0015151515151515152	0.0015151515151515152
65	LWRK vs. —Flexible-DDQN—MachineCompressed-model-6	29.846822620051476	9.653097191822004E-196	0.0015384615384615385	0.0018181818181818182
64	SPT vs. —Flexible-DDQN—Complete-model-2	29.631689983564083	5.839387309438644E-193	0.0015625	0.0018181818181818182
63	SPT vs. —Flexible-DDQN—Complete-model-3	28.295603083273445	3.91437840399833E-176	0.0015873015873015873	0.0018181818181818182
62	LWRK vs. —Flexible-DDQN—Complete-model-2	26.834965709226935	1.2634820319193417E-158	0.0016129032258064516	0.0018181818181818182
61	LWRK vs. —Flexible-DDQN—Complete-model-3	25.498878808936297	2.028507031767105E-143	0.001639344262295082	0.0018181818181818182
60	MS vs. —Flexible-DDQN—MachineCompressed-model-6	25.39697387586325	2.723659525585741E-142	0.0016666666666666668	0.0018181818181818182
59	SPT vs. —Flexible-DDQN—MachineCompressed-model-4	24.876126440156764	1.3490894692848313E-136	0.0016949152542372883	0.0018181818181818182
58	WINQ vs. —Flexible-DDQN—MachineCompressed-model-6	24.62702549264494	6.487856993552961E-134	0.001724137931034483	0.0018181818181818182
57	SPT vs. —Flexible-DDQN—MachineCompressed-model-5	24.23072853069432	1.0557648328842728E-129	0.0017543859649122807	0.0018181818181818182
56	MS vs. —Flexible-DDQN—Complete-model-2	22.385116965038712	5.496112959143124E-111	0.0017857142857142859	0.0018181818181818182
55	LWRK vs. —Flexible-DDQN—MachineCompressed-model-4	22.079402165819616	4.9863923777841605E-108	0.0018181818181818182	0.0018181818181818182
54	WINQ vs. —Flexible-DDQN—Complete-model-2	21.6151685818204	1.293294051199028E-103	0.001851851851851852	0.002173913043478261
53	LWRK vs. —Flexible-DDQN—MachineCompressed-model-5	21.434004256357174	6.439657160147765E-102	0.0018867924528301887	0.002173913043478261
52	SPT vs. —Flexible-DDQN—Complete-model-1	21.40003594533286	1.3350508906873948E-101	0.0019230769230769232	0.002173913043478261
51	MS vs. —Flexible-DDQN—Complete-model-3	21.04903006474807	2.3340746561245752E-98	0.00196078431372549	0.002173913043478261
50	—Flexible-DDQN—MachineCompressed-model-6 vs. —Flexible-DDQN—MachineCompressed-model-7	20.72669724846076	2.255266403391616E-95	0.002	0.002173913043478261
49	WINQ vs. —Flexible-DDQN—Complete-model-3	20.27908168152976	1.9677056825567682E-91	0.0020408163265306124	0.002173913043478261
48	SPT vs. —Flexible-DDQN—Complete-model-0	18.863735388848887	2.2662862869193515E-79	0.0020833333333333333	0.002173913043478261
47	LWRK vs. —Flexible-DDQN—Complete-model-1	18.603311670995712	3.020582624140367E-77	0.002127659574468085	0.002173913043478261
46	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-7	17.708812814021535	3.585555365810654E-70	0.002173913043478261	0.002173913043478261
45	MS vs. —Flexible-DDQN—MachineCompressed-model-4	17.62955342163139	1.4611655849383949E-69	0.0022222222222222222	0.0022222222222222222
44	MS vs. —Flexible-DDQN—MachineCompressed-model-5	16.984155512168947	1.0759105902148033E-64	0.0022727272727272727	0.002564102564102564
43	WINQ vs. —Flexible-DDQN—MachineCompressed-model-4	16.859605038413076	8.918300390117836E-64	0.002325581395348837	0.002564102564102564
42	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-7	16.372725913730896	2.9949398604809674E-60	0.002380952380952381	0.002564102564102564
41	WINQ vs. —Flexible-DDQN—MachineCompressed-model-5	16.214207128950633	4.002089789480749E-59	0.0024390243902439024	0.002564102564102564
40	LWRK vs. —Flexible-DDQN—Complete-model-0	16.06701111451174	4.3453915764994065E-58	0.0025	0.002564102564102564
39	MS vs. —Flexible-DDQN—Complete-model-1	14.153462926807487	1.7778253712739136E-45	0.002564102564102564	0.002564102564102564
38	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-6	13.779811505539739	3.371513321603013E-43	0.002631578947368421	0.0027027027027027023
37	WINQ vs. —Flexible-DDQN—Complete-model-1	13.383514543589172	7.549157432382833E-41	0.0027027027027027023	0.0027027027027027023
36	—Flexible-DDQN—MachineCompressed-model-4 vs. —Flexible-DDQN—MachineCompressed-model-7	12.953249270614215	2.2521572385712132E-38	0.0027777777777777778	0.0027777777777777778
35	—Flexible-DDQN—MachineCompressed-model-5 vs. —Flexible-DDQN—MachineCompressed-model-7	12.307851361151773	8.218199289835289E-35	0.002857142857142857	0.0029411764705882353
34	SPT vs. —Flexible-DDQN—MachineCompressed-model-7	11.92287716954255	8.994765142661213E-33	0.0029411764705882353	0.0029411764705882353
33	MS vs. —Flexible-DDQN—Complete-model-0	11.617162370323513	3.371490877716214E-31	0.0030303030303030303	0.0032258064516129032
32	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-6	11.243510949055764	2.4926745456758978E-29	0.003125	0.0032258064516129032
31	WINQ vs. —Flexible-DDQN—Complete-model-0	10.847213987105198	2.0559679557372043E-27	0.0032258064516129032	0.0032258064516129032
30	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—Complete-model-2	10.767954594715198	4.877157280712038E-27	0.0033333333333333333	0.0033333333333333333
29	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-7	9.477158775790311	2.6130081560703538E-21	0.003448275862068966	0.003448275862068966
28	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—Complete-model-3	9.43186769442456	4.028507767826899E-21	0.0035714285714285718	0.0035714285714285718
27	LWRK vs. —Flexible-DDQN—MachineCompressed-model-7	9.1261528952054	7.097672536721669E-20	0.0037037037037037034	0.0037037037037037034
26	—Flexible-DDQN—MachineCompressed-model-5 vs. —Flexible-DDQN—MachineCompressed-model-6	8.412818363694303	4.002745525339804E-17	0.0038461538461538464	0.004
25	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—Complete-model-2	8.231654038231223	1.8464588256051624E-16	0.004	0.004
24	SPT vs. WINQ	8.016521401743686	1.087819784864503E-15	0.0041666666666666667	0.0041666666666666667
23	—Flexible-DDQN—MachineCompressed-model-4 vs. —Flexible-DDQN—MachineCompressed-model-6	7.7674204542318614	8.010060951056268E-15	0.004347826086956522	0.004347826086956522
22	MS vs. SPT	7.246573018525375	4.2744878131863167E-13	0.0045454545454545456	0.0045454545454545456
21	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-7	6.940858219306337	3.897250025255635E-12	0.004761904761904762	0.004761904761904762
20	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—Complete-model-3	6.895567137940586	5.36503279103777E-12	0.005	0.005
19	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-4	6.012391051307877	1.828066890205121E-9	0.005263157894736842	0.005263157894736842
18	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-5	5.400961452869764	6.628466939965962E-8	0.0055555555555555556	0.0055555555555555556
17	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—MachineCompressed-model-5	5.366993141845435	8.006009974552906E-8	0.0058823529411764705	0.0058823529411764705
16	LWRK vs. WINQ	5.219797127406541	1.791192311678173E-7	0.00625	0.00625
15	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-4	4.755563543407321	1.9789360052980458E-6	0.0066666666666666667	0.0066666666666666667
14	MS vs. —Flexible-DDQN—MachineCompressed-model-7	4.676304151017175	2.9209129269720545E-6	0.0071428571428571435	0.0071428571428571435
13	LWRK vs. MS	4.449848744188227	8.593078726633564E-6	0.007692307692307693	0.007692307692307693
12	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-6	4.3479438111151785	1.3741979701959572E-5	0.0083333333333333333	0.0083333333333333333
11	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-5	4.064874552579124	4.805830377978235E-5	0.009090909090909092	0.009090909090909092
10	WINQ vs. —Flexible-DDQN—MachineCompressed-model-7	3.906355767798861	9.36985285211739E-5	0.01	0.01
9	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-4	3.476090494823903	5.087805753050387E-4	0.011111111111111112	0.011111111111111112
8	—Flexible-DDQN—Complete-model-3 vs. —Flexible-DDQN—MachineCompressed-model-4	3.4194766431166825	6.274171861465427E-4	0.0125	0.0125
7	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—MachineCompressed-model-6	3.01185691082454	0.0025965496031887317	0.014285714285714287	0.014285714285714287
6	—Flexible-DDQN—Complete-model-1 vs. —Flexible-DDQN—MachineCompressed-model-5	2.830692585361461	0.00464473394229294	0.016666666666666666	0.016666666666666666
5	LWRK vs. SPT	2.7967242743371474	0.005162356812227744	0.02	0.02
4	—Flexible-DDQN—Complete-model-0 vs. —Flexible-DDQN—Complete-model-1	2.5363005564839742	0.011203053689111592	0.025	0.025
3	—Flexible-DDQN—Complete-model-2 vs. —Flexible-DDQN—Complete-model-3	1.3360869002906386	0.18152087117927868	0.033333333333333333	0.033333333333333333
2	MS vs. WINQ	0.7699483832183142	0.4413305118271947	0.05	0.05
1	—Flexible-DDQN—MachineCompressed-model-4 vs. —Flexible-DDQN—MachineCompressed-model-5	0.645397909462442	0.5186693578126694	0.1	0.1

Table 7: Adjusted  $p$ -values

i	hypothesis	unadjusted $p$	$P_{Nemc}$	$P_{Holm}$	$P_{Shaf}$	$P_{Berg}$
1	SPT vs .—Flexible-DDQN—MachineCompressed-model-6	9.894312011186747E-234	6.530245927383253E-232	6.530245927383253E-232	6.530245927383253E-232	0.0
2	LWRK vs .—Flexible-DDQN—MachineCompressed-model-6	9.653097191822004E-196	6.371044146602523E-194	6.274513174684303E-194	5.309203455502102E-194	0.0
3	SPT vs .—Flexible-DDQN—Complete-model-2	5.839387309438644E-193	3.8539956242295054E-191	3.7372078780407323E-191	3.211663020191254E-191	0.0
4	SPT vs .—Flexible-DDQN—Complete-model-3	3.91437840399833E-176	2.583489746638898E-174	2.4660583945189478E-174	2.1529081221990815E-174	0.0
5	LWRK vs .—Flexible-DDQN—Complete-model-2	1.2634820319193417E-158	8.338981410667654E-157	7.833588597899919E-157	6.94915117555638E-157	0.0
6	LWRK vs .—Flexible-DDQN—Complete-model-3	2.028507031767105E-143	1.3388146409662894E-141	1.2373892893779341E-141	1.1156788674719078E-141	0.0
7	MS vs .—Flexible-DDQN—MachineCompressed-model-6	2.723659525585741E-142	1.7976152868865892E-140	1.6341957153514447E-140	1.4980127390721577E-140	0.0
8	SPT vs .—Flexible-DDQN—MachineCompressed-model-4	1.3490894692848313E-136	8.903990497279887E-135	7.959627868780505E-135	7.419992081066573E-135	0.0
9	WINQ vs .—Flexible-DDQN—MachineCompressed-model-6	6.487856993552961E-134	4.281985615744954E-132	3.7629570562607175E-132	3.5683213464541285E-132	0.0
10	SPT vs .—Flexible-DDQN—MachineCompressed-model-5	1.0557648328842728E-129	6.968047897036201E-128	6.017859547440355E-128	5.8067065808635E-128	0.0
11	MS vs .—Flexible-DDQN—Complete-model-2	5.496112959143124E-111	3.627434553034462E-109	3.0778232571201494E-109	3.0228621275287186E-109	0.0
12	LWRK vs .—Flexible-DDQN—MachineCompressed-model-4	4.9863923777841605E-108	3.291018969337546E-106	2.7425158077812883E-106	2.7425158077812883E-106	0.0
13	WINQ vs .—Flexible-DDQN—Complete-model-2	1.293294051199028E-103	8.535740737913585E-102	6.983787876474751E-102	5.949152635515529E-102	0.0
14	LWRK vs .—Flexible-DDQN—MachineCompressed-model-5	6.439657160147765E-102	4.250173725697525E-100	3.4130182948783153E-100	2.96224293667972E-100	0.0
15	SPT vs .—Flexible-DDQN—Complete-model-1	1.3350580906873948E-101	8.811335878536806E-100	6.942264631574453E-100	6.141234097162016E-100	0.0
16	MS vs .—Flexible-DDQN—Complete-model-3	2.3340746561245752E-98	1.5404892730422197E-96	1.1903780746235334E-96	1.0736743418173046E-96	0.0
17	—Flexible-DDQN—MachineCompressed-model-6 vs .—Flexible-DDQN—MachineCompressed-model-7	2.25266403391616E-95	1.4884758262384665E-93	1.127633201695808E-93	1.0374225455601432E-93	0.0
18	WINQ vs .—Flexible-DDQN—Complete-model-3	1.9677056825567682E-91	1.298685750487467E-89	9.641757844528164E-90	9.051446139761134E-90	0.0
19	SPT vs .—Flexible-DDQN—Complete-model-0	2.2662862869193515E-79	1.495748949366772E-77	1.0878174177212888E-77	1.0424916919829017E-77	0.0
20	LWRK vs .—Flexible-DDQN—Complete-model-1	3.020582624140367E-77	1.993584531932642E-75	1.4196738333459725E-75	1.3894680071045688E-75	0.0
21	—Flexible-DDQN—Complete-model-2 vs .—Flexible-DDQN—MachineCompressed-model-7	3.58555365810654E-70	2.366466541435032E-68	1.649355468272901E-68	1.649355468272901E-68	0.0
22	MS vs .—Flexible-DDQN—MachineCompressed-model-4	1.4611655849383949E-69	9.643692860593405E-68	6.575245132222777E-68	6.575245132222777E-68	0.0
23	MS vs .—Flexible-DDQN—MachineCompressed-model-5	1.0759105902148033E-64	7.101009895417702E-63	4.7340065969451344E-63	4.196051301837733E-63	0.0
24	WINQ vs .—Flexible-DDQN—MachineCompressed-model-4	8.918300390117836E-64	5.886078257477771E-62	3.8348691677506694E-62	3.478137152145956E-62	0.0
25	—Flexible-DDQN—Complete-model-3 vs .—Flexible-DDQN—MachineCompressed-model-7	2.9949398604809674E-60	1.9766603079174386E-58	1.2578747414020063E-58	1.1680265455875772E-58	0.0
26	WINQ vs .—Flexible-DDQN—MachineCompressed-model-5	4.002089789480749E-59	2.641379261057294E-57	1.640856136871071E-57	1.560815017897492E-57	0.0
27	LWRK vs .—Flexible-DDQN—Complete-model-0	4.3453915764994065E-58	2.867958440489608E-56	1.7381566305997625E-56	1.6947027148347685E-56	0.0
28	MS vs .—Flexible-DDQN—Complete-model-1	1.7778253712739136E-45	1.173364745040783E-43	6.933518947968263E-44	6.933518947968263E-44	0.0
29	—Flexible-DDQN—Complete-model-0 vs .—Flexible-DDQN—MachineCompressed-model-6	3.371513321603013E-43	2.2251987922579886E-41	1.2811750622091448E-41	1.247459928993115E-41	0.0
30	WINQ vs .—Flexible-DDQN—Complete-model-1	7.549157432382833E-41	4.9824439053726703E-39	2.7931882499816485E-39	2.7931882499816485E-39	0.0
31	—Flexible-DDQN—MachineCompressed-model-4 vs .—Flexible-DDQN—MachineCompressed-model-7	2.2521572385712132E-38	1.4864237774570007E-36	8.107766058856367E-37	8.107766058856367E-37	0.0
32	—Flexible-DDQN—MachineCompressed-model-5 vs .—Flexible-DDQN—MachineCompressed-model-7	8.218199289835289E-35	5.424011531291291E-33	2.8763697514423512E-33	2.7941877585439985E-33	0.0
33	SPT vs .—Flexible-DDQN—MachineCompressed-model-7	8.994765142661213E-33	5.9365449941564005E-31	3.0582201485048127E-31	3.0582201485048127E-31	0.0
34	MS vs .—Flexible-DDQN—Complete-model-0	3.371490877716214E-31	2.2251839792927013E-29	1.1125919896463507E-29	1.0451621720920264E-29	0.0
35	—Flexible-DDQN—Complete-model-1 vs .—Flexible-DDQN—MachineCompressed-model-6	2.4926745456758978E-29	1.6451652001460927E-27	7.976558546162873E-28	7.727291091595284E-28	0.0
36	WINQ vs .—Flexible-DDQN—Complete-model-0	2.0559679557372043E-27	1.3569388507865549E-25	6.373500662785333E-26	6.373500662785333E-26	0.0
37	—Flexible-DDQN—Complete-model-0 vs .—Flexible-DDQN—Complete-model-2	4.877157280712038E-27	3.218923805269945E-25	1.4631471842136114E-25	1.4631471842136114E-25	0.0
38	—Flexible-DDQN—Complete-model-1 vs .—Flexible-DDQN—MachineCompressed-model-7	2.6130081560703538E-21	1.7245853830064336E-19	7.577723652604026E-20	7.577723652604026E-20	0.0
39	—Flexible-DDQN—Complete-model-0 vs .—Flexible-DDQN—Complete-model-3	4.028507767826899E-21	2.658815126765753E-19	1.1279821749915317E-19	1.1279821749915317E-19	0.0
40	LWRK vs .—Flexible-DDQN—MachineCompressed-model-7	7.097672536721669E-20	4.6844638742363015E-18	1.9163715849148507E-18	1.9163715849148507E-18	0.0
41	—Flexible-DDQN—MachineCompressed-model-5 vs .—Flexible-DDQN—MachineCompressed-model-6	4.002745525339804E-17	2.6418120467242703E-15	1.040713836588349E-15	1.000686381334951E-15	0.0
42	—Flexible-DDQN—Complete-model-1 vs .—Flexible-DDQN—Complete-model-2	1.846458826051624E-16	1.2186628248994072E-14	4.616147064012906E-15	4.616147064012906E-15	0.0
43	SPT vs .WINQ	1.087819784864503E-15	7.17961058010572E-14	2.610767483674807E-14	2.610767483674807E-14	0.0
44	—Flexible-DDQN—MachineCompressed-model-4 vs .—Flexible-DDQN—MachineCompressed-model-6	8.010060951056268E-15	5.286640227697137E-13	1.8423140187429417E-13	1.8423140187429417E-13	0.0
45	MS vs .SPT	4.2744878131863167E-13	2.821161956702969E-11	9.403873189009897E-12	9.403873189009897E-12	0.0
46	—Flexible-DDQN—Complete-model-0 vs .—Flexible-DDQN—MachineCompressed-model-7	3.897250025255635E-12	2.572185016668719E-10	8.184225053036834E-11	8.184225053036834E-11	0.0
47	—Flexible-DDQN—Complete-model-1 vs .—Flexible-DDQN—Complete-model-3	5.36503279103777E-12	3.540921642084928E-10	1.0730065582075539E-10	1.0730065582075539E-10	0.0
48	—Flexible-DDQN—Complete-model-0 vs .—Flexible-DDQN—MachineCompressed-model-4	1.828066890205121E-9	1.20652414753538E-7	3.47332709138973E-8	3.47332709138973E-8	0.0
49	—Flexible-DDQN—Complete-model-2 vs .—Flexible-DDQN—MachineCompressed-model-5	6.628466939965962E-8	4.374788180377535E-6	1.1931240491938733E-6	1.1931240491938733E-6	0.0
50	—Flexible-DDQN—Complete-model-0 vs .—Flexible-DDQN—MachineCompressed-model-5	8.006009974552906E-8	5.283966583204919E-6	1.361021695673994E-6	1.361021695673994E-6	0.0
51	LWRK vs .WINQ	1.791192311678173E-7	1.1821869257075942E-5	2.865907698685077E-6	2.865907698685077E-6	0.0
52	—Flexible-DDQN—Complete-model-2 vs .—Flexible-DDQN—MachineCompressed-model-4	1.9789360052980458E-6	1.3060977634967103E-4	2.9684040079470686E-5	2.9684040079470686E-5	0.0
53	MS vs .—Flexible-DDQN—MachineCompressed-model-7	2.9209129269720545E-6	1.9278025318015559E-4	4.089278097760876E-5	4.089278097760876E-5	0.0
54	LWRK vs .MS	8.593078726633564E-6	5.671431959578152E-4	1.1171002344623633E-4	1.1171002344623633E-4	0.0
55	—Flexible-DDQN—Complete-model-3 vs .—Flexible-DDQN—MachineCompressed-model-6	1.3741979701959572E-5	9.069706603293318E-4	1.6490375642351485E-4	1.6490375642351485E-4	0.0
56	—Flexible-DDQN—Complete-model-3 vs .—Flexible-DDQN—MachineCompressed-model-5	4.8058303779778235E-5	0.0031718480494653633	5.286413415775606E-4	5.286413415775606E-4	0.0
57	WINQ vs .—Flexible-DDQN—MachineCompressed-model-7	9.36985285211739E-5	0.0061841028823974775	9.36985285211739E-4	9.36985285211739E-4	0.0
58	—Flexible-DDQN—Complete-model-1 vs .—Flexible-DDQN—MachineCompressed-model-4	5.087805753050387E-4	0.033579517970132554	0.0045790251777453475	0.0045790251777453475	0.0
59	—Flexible-DDQN—Complete-model-3 vs .—Flexible-DDQN—MachineCompressed-model-4	6.274171861465427E-4	0.041409534285671824	0.005019337489172342	0.005019337489172342	0.0
60	—Flexible-DDQN—Complete-model-2 vs .—Flexible-DDQN—MachineCompressed-model-6	0.0025965496031887317	0.17137227381045628	0.018175847222321122	0.018175847222321122	0.0
61	—Flexible-DDQN—Complete-model-1 vs .—Flexible-DDQN—MachineCompressed-model-5	0.004644733942292924	0.30655244019133404	0.027868403653757638	0.027868403653757638	0.0
62	LWRK vs .SPT	0.005162356812227744	0.3407155496070311	0.027868403653757638	0.027868403653757638	0.0
63	—Flexible-DDQN—Complete-model-0 vs .—Flexible-DDQN—Complete-model-1	0.011203053689111592	0.739401543481365	0.04481221475644637	0.04481221475644637	0.0
64	—Flexible-DDQN—Complete-model-2 vs .—Flexible-DDQN—Complete-model-3	0.18152087117927868	11.980377497832393	0.5445626135378361	0.5445626135378361	0.0
65	MS vs .WINQ	0.4413305118271947	29.12781378059485	0.8826610236543894	0.8826610236543894	0.0
66	—Flexible-DDQN—MachineCompressed-model-4 vs .—Flexible-DDQN—MachineCompressed-model-5	0.5186693578126694	34.23217761563618	0.8826610236543894	0.8826610236543894	0.0