

Errata for ALRⁿ: Accelerated Higher-Order Logistic Regression

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1 Introduction

The p-values in three tables in the paper [1], when reporting Win-Draw-Loss are incorrectly reported. The actual W-D-L results are accurate only the p-values are wrong. In this document, we present the tables with corrected p-values.

References

- [1] Zaidi, N., Webb, G., Carman, M., Petitjean, F., Cerquides, J.: ALRⁿ: accelerated higher-order logistic regression. *Mach Learn* pp. 104–151 (2016)

	ALR ² vs. A2JE		ALR ³ vs. A3JE	
	W-D-L	<i>p</i>	W-D-L	<i>p</i>
<i>All Datasets</i>				
Bias	62/3/11	< 0.001	55/9/12	< 0.001
Variance	21/4/51	< 0.001	25/2/49	0.007
<i>Little Datasets</i>				
0-1 Loss	47/4/25	0.012	39/2/35	0.727
RMSE	39/0/37	0.908	32/0/44	0.206
<i>Big Datasets</i>				
0-1 Loss	8/0/0	0.007	7/0/1	0.039
RMSE	8/0/0	0.007	7/0/1	0.039

Table 1: Win-Draw-Loss: ALR² vs. A2JE and ALR³ vs A3JE. *p* is two-tail binomial sign test. Results are significant if $p \leq 0.05$.

	ALR² vs. A1DE		ALR³ vs. A2DE	
	W-D-L	<i>p</i>	W-D-L	<i>p</i>
<i>All Datasets</i>				
Bias	60/5/11	< 0.001	47/11/18	< 0.001
Variance	22/9/45	0.006	26/4/46	0.024
<i>Little Datasets</i>				
0-1 Loss	43/3/30	0.159	33/4/39	0.556
RMSE	30/0/46	0.084	24/0/52	0.001
<i>Big Datasets</i>				
0-1 Loss	8/0/0	0.007	7/0/1	0.039
RMSE	8/0/0	0.007	7/0/1	0.039

Table 2: Win-Draw-Loss: ALR² vs. A1DE and ALR³ vs A2DE. *p* is two-tail binomial sign test. Results are significant if $p \leq 0.05$.

	ALR² vs. RF		ALR³ vs. RF	
	W-D-L	<i>p</i>	W-D-L	<i>p</i>
<i>All Datasets</i>				
Bias	39/9/28	0.221	35/9/32	0.807
Variance	25/2/49	0.007	21/3/52	< 0.001
<i>Little Datasets</i>				
0-1 Loss	26/3/47	0.018	22/1/53	< 0.001
RMSE	26/0/50	0.007	25/0/51	0.003
<i>Big Datasets</i>				
0-1 Loss	4/1/3	1.000	5/0/3	0.726
RMSE	4/0/4	1.000	5/0/3	0.726

Table 3: Win-Draw-Loss: ALR² vs. RF and ALR³ vs RF. *p* is two-tail binomial sign test. Results are significant if $p \leq 0.05$.