

kNNR	Best	Basic	Inv	Caruana	SWRSC	SWRSCX	WCH	SCH
automobile	23.85(5)	21.95 (1)	21.96(2)	22.02(3)	27.21(6)	23.04(4)	21.28	10.26
fertility	112.60(6)	96.14 (1)	96.41(2)	98.38(3)	106.84(4)	108.23(5)	93.40	59.15
flow	90.16(4)	87.19(3)	86.81(2)	90.28(5)	97.01(6)	61.32 (1)	80.93	40.73
forest	101.94(3)	106.33(6)	105.25(5)	104.83(4)	99.42 (1)	100.65(2)	101.94	90.47
servo	50.35(6)	46.85(3)	46.89(4)	45.14(2)	44.49 (1)	48.55(5)	42.76	19.39
slump	95.58(4)	91.94(3)	91.88(2)	96.24(5)	104.05(6)	89.64 (1)	86.73	47.26
traffic	35.28(4)	32.84(2)	32.77 (1)	33.92(3)	35.98(5)	38.16(6)	31.25	15.21
wine_red	84.81(6)	79.03(2)	79.22(3)	81.97(5)	80.84(4)	65.19 (1)	84.64	37.56
wine_white	84.91(6)	78.33(2)	78.48(3)	80.27(5)	80.04(4)	65.74 (1)	83.47	36.56
Avg. Rank	(4.89)	(2.56)	(2.67)	(3.89)	(4.11)	(2.89)	-	-
Ridge	Best	Basic	Inv	Caruana	SWRSC	SWRSCX	WCH	SCH
automobile	19.51(6)	16.92 (1)	16.95(2)	17.20(3)	18.64(4)	18.77(5)	17.03	9.05
fertility	102.34(2)	103.72(5)	103.70(4)	102.50(3)	97.05 (1)	106.99(6)	102.34	96.86
flow	65.66(3)	66.45(6)	66.45(5)	65.73(4)	64.61(2)	63.24 (1)	65.30	63.78
forest	99.01(2)	99.46(5)	99.46(4)	99.06(3)	98.26 (1)	99.69(6)	98.98	97.74
servo	62.32 (1)	62.51(3)	62.51(4)	62.36(2)	63.54(6)	63.05(5)	61.83	61.36
slump	86.55(3)	87.12(6)	87.11(5)	86.61(4)	85.59(2)	78.64 (1)	86.18	83.92
traffic	39.51(3)	41.04(6)	40.95(5)	39.90(4)	36.84(2)	36.01 (1)	39.47	38.01
wine_red	64.91(2)	65.82(6)	65.74(5)	64.91 (1)	64.96(3)	64.99(4)	64.84	51.31
wine_white	72.66(3)	73.79(6)	73.71(5)	72.43 (1)	72.64(2)	72.66(4)	72.02	60.11
Avg. Rank	(2.78)	(4.89)	(4.33)	(2.78)	(2.56)	(3.67)	-	-
Lasso	Best	Basic	Inv	Caruana	SWRSC	SWRSCX	WCH	SCH
automobile	18.45(5)	18.45(3)	18.45(2)	18.45(4)	18.19 (1)	19.45(6)	18.45	18.45
fertility	95.85(4)	94.17 (1)	94.17(2)	94.83(3)	96.66(5)	103.80(6)	92.74	90.36
flow	66.81(3)	66.82(6)	66.82(5)	66.82(4)	65.59(2)	62.85 (1)	66.81	66.79
forest	100.09(3)	100.13(6)	100.13(5)	100.12(4)	98.34 (1)	99.47(2)	100.09	100.08
servo	63.62(5)	63.38 (1)	63.38(2)	63.43(3)	63.77(6)	63.52(4)	62.67	62.15
slump	87.59(3)	87.61(6)	87.61(5)	87.60(4)	86.05(2)	81.32 (1)	87.59	87.55
traffic	38.64(3)	39.03(6)	39.02(5)	38.96(4)	37.39 (1)	37.58(2)	38.60	38.16
wine_red	69.24(3)	70.68(6)	70.67(5)	70.06(4)	68.94(2)	65.74 (1)	69.24	66.52
wine_white	78.33(3)	78.39(6)	78.39(5)	78.36(4)	78.31(2)	73.63 (1)	78.33	77.45
Avg. Rank	(3.56)	(4.56)	(4.00)	(3.78)	(2.44)	(2.67)	-	-
SVR	Best	Basic	Inv	Caruana	SWRSC	SWRSCX	WCH	SCH
automobile	20.98(4)	84.06(6)	45.64(5)	20.30 (1)	20.94(3)	20.31(2)	19.66	9.78
fertility	97.80(5)	92.72 (1)	92.98(2)	96.93(4)	96.80(3)	105.35(6)	89.96	49.63
flow	72.96(4)	79.59(5)	83.35(6)	66.26(2)	72.86(3)	63.65 (1)	59.75	25.32
forest	100.85(4)	99.22 (1)	99.56(3)	99.38(2)	101.20(6)	101.00(5)	97.20	82.09
servo	22.64(4)	67.92(6)	46.02(5)	22.05(3)	19.13 (1)	20.16(2)	15.31	10.60
slump	71.52 (2)	92.52(5)	90.71(4)	71.08(1)	164.42(6)	89.02(3)	71.26	17.17
traffic	36.96(2)	45.02(5)	38.79(4)	36.33 (1)	38.02(3)	45.25(6)	25.45	6.12
wine_red	65.92(4)	67.67(6)	66.52(5)	59.62(3)	57.33(2)	57.16 (1)	64.48	13.30
wine_white	72.60(6)	70.13(5)	68.61(4)	61.14(3)	57.68(2)	57.42 (1)	70.81	12.93
Avg. Rank	(3.89)	(4.44)	(4.22)	(2.22)	(3.22)	(3.00)	-	-

Table 6: The 3-fold cross validation relative mean squared error and Friedman ranks for all datasets when the best hyperparameter configuration trial (Best), simple average (Basic), the inverse of the error (Inv), Caruana method (Caruana) and non-hyperparametric stepwise regression adaptation with stop criterion adding features (SWRSCX) or not (SWRSC), all taking into account several baseline systems (kNNR, Ridge, Lasso and SVR) and the GS sampling strategy. The scores for the cheating approaches WCH and SCH are also shown, but they were not included in the computation of the Friedman ranks.