kNNR	Best	LR	LRX	SWR	SWRX	SWRSC	SWRSCX
automobile	27.27(7)	23.16(3)	**18.40**(1)	24.14(5)	24.23(6)	23.90(4)	19.88(2)
fertility	109.07(6)	103.95(5)	111.83(7)	97.51(2)	**96.98**(1)	99.78(3)	102.26(4)
flow	102.86(7)	84.04(5)	71.73(3)	83.36(4)	67.93(2)	87.29(6)	**59.15**(1)
forest	141.64(7)	99.27(4)	101.36(6)	98.75(3)	**98.24**(1)	98.52(2)	99.68(5)
servo	55.11(7)	52.14(6)	**45.64**(1)	51.70(4)	51.96(5)	51.09(3)	50.50(2)
slump	111.84(7)	94.65(6)	92.49(5)	89.61(4)	**81.98**(1)	86.77(3)	82.35(2)
traffic	39.66(5)	34.83(3)	44.06(7)	34.86(4)	34.83(2)	**32.15**(1)	39.83(6)
wine_red	110.39(7)	81.47(4)	**62.97**(1)	85.90(6)	82.04(5)	81.38(3)	65.27(2)
wine_white	96.76(7)	80.25(4)	**66.07**(1)	85.96(6)	85.88(5)	80.07(3)	66.40(2)
Avg. Rank	(6.67)	(4.44)	(3.56)	(4.22)	(3.11)	(3.11)	(**2.89**)
Ridge	Best	LR	LRX	SWR	SWRX	SWRSC	SWRSCX
automobile	20.00(5)	2.25E+07(7)	1.14E+07(6)	18.62(3)	18.78(4)	18.22(2)	**16.23**(1)
fertility	104.17(5)	1.30E+13(6)	2.38E+13(7)	102.59(2)	103.98(4)	**95.22**(1)	103.98(3)
flow	66.89(5)	6.00E+04(7)	302.43(6)	66.00(3)	66.69(4)	65.42(2)	**57.15**(1)
forest	99.44(5)	2.11E+09(7)	3.72E+08(6)	98.24(2)	**98.02**(1)	98.36(3)	99.20(4)
servo	62.27(5)	493.06(6)	699.74(7)	61.44(4)	**60.84**(1)	61.05(2)	61.10(3)
slump	87.71(5)	4.03E+06(7)	8.06E+04(6)	86.33(4)	85.19(2)	85.62(3)	**79.15**(1)
traffic	41.28(5)	5.17E+13(6)	1.06E+16(7)	39.06(4)	38.38(3)	38.31(2)	**36.18**(1)
wine_red	69.12(5)	4.17E+06(7)	1.34E+04(6)	64.81(1)	65.07(4)	64.82(2)	64.90(3)
wine_white	78.12(5)	8.17E+09(6)	1.00E+10(7)	73.00(3)	73.10(4)	72.93(2)	**72.83**(1)
Avg. Rank	(5.00)	(6.56)	(6.44)	(2.89)	(3.00)	(2.11)	(**2.00**)
Lasso	Best	LR	LRX	SWR	SWRX	SWRSC	SWRSCX
automobile	18.45(2)	23.65(7)	19.02(3)	19.62(6)	19.62(5)	19.39(4)	**16.44**(1)
fertility	92.95(3)	93.13(5)	110.25(7)	92.95(1)	**92.95**(1)	93.07(4)	96.93(6)
flow	66.66(5)	285.32(7)	117.76(6)	65.12(3)	66.16(4)	64.99(2)	**57.16**(1)
forest	99.65(6)	99.58(5)	101.48(7)	98.13(2)	**98.02**(1)	98.27(3)	99.33(4)
servo	102.02(7)	69.73(6)	65.18(5)	60.84(4)	60.61(3)	59.63(2)	**56.87**(1)
slump	86.85(5)	411.18(7)	137.06(6)	85.19(4)	84.63(2)	84.90(3)	**79.17**(1)
traffic	40.24(4)	2.06E+09(7)	4.45E+08(6)	35.20(3)	35.15(2)	**34.86**(1)	43.84(5)
wine_red	96.71(5)	134.17(6)	626.27(7)	78.49(4)	75.95(3)	75.67(2)	**65.63**(1)
wine_white	95.58(7)	78.45(3)	**72.98**(1)	82.90(5)	83.23(6)	81.56(4)	73.74(2)
Avg. Rank	(4.89)	(5.89)	(5.33)	(3.61)	(3.06)	(2.78)	(**2.44**)
SVR	Best	LR	LRX	SWR	SWRX	SWRSC	SWRSCX
automobile	114.30(5)	3.68E+14(7)	7.76E+13(6)	76.07(3)	39.50(2)	76.54(4)	**16.10**(1)
fertility	184.62(5)	1.03E+03(6)	1.26E+04(7)	95.79(1)	**95.79**(1)	101.98(4)	101.94(3)
flow	106.54(5)	1.04E+13(7)	7.76E+12(6)	93.44(4)	66.55(2)	91.07(3)	**58.82**(1)
forest	101.04(5)	3.97E+11(7)	2.01E+08(6)	98.38(3)	**98.05**(1)	98.38(2)	99.69(4)
servo	117.03(5)	326.15(6)	924.38(7)	26.90(3)	28.44(4)	**23.37**(1)	24.23(2)
slump	116.65(5)	4.38E+14(7)	1.53E+12(6)	97.90(4)	81.68(2)	95.55(3)	**78.91**(1)
traffic	89.38(5)	1.02E+04(7)	4.28E+03(6)	55.34(3)	55.82(4)	50.80(2)	**41.93**(1)
wine_red	123.91(7)	71.51(4)	**59.53**(1)	76.59(6)	75.36(5)	71.02(3)	60.34(2)
wine_white	99.63(7)	73.36(6)	**59.24**(1)	72.85(4)	73.04(5)	70.17(3)	61.62(2)
Avg. Rank	(5.44)	(6.33)	(5.11)	(3.50)	(2.94)	(2.78)	(**1.89**)

Table 4: The 3-fold cross validation relative mean squared error and Friedman ranks for all datasets when the best hyperparameter configuration trial (Best), linear regression via least squared with the option of adding features (LRX) or not (LR), non-hyperparametric stepwise regression adding features (SWRX) or not (SWR) 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 PSO sampling strategy.