| Fertility | MLS | Dataset | Best | BEM | IEW | Caruana | RBST(ICM) |
|--|-----------|---------------------|-----------|-----------|-----------|-----------|------------------|
| Ridge | | automobile | 19.64(5) | 17.12(1) | 17.16(2) | 17.60(4) | 17.46(3) |
| Ridge | | fertility | 109.01(2) | 110.35(5) | 110.33(4) | 109.01(2) | 104.48(1) |
| Ridge | | flow | 66.03(2) | 66.64(5) | 66.64(4) | 66.03(2) | 63.94(1) |
| Slump | | forest | 109.81(2) | 112.69(5) | 112.68(4) | 109.81(3) | 102.01(1) |
| traffic wine.white 72.80(3) 73.93(5) 73.86(4) 72.64(2) 72.86 Avg. Rank (2.72) (4.50) (3.78) (2.50) (7.86(4) 72.64(2) 72.86(3) 73.93(5) 73.86(4) 72.64(2) 72.86 Avg. Rank (2.72) (4.50) (3.78) (2.50) (1.60) (7.86(2) 72.86(2) 73.86(4) 72.64(2) 72.86 automobile fertility (10.502(4) 99.46(1) 99.74(2) 104.31(3) 105.76(2) 105.76(| Ridge | servo | 63.52(2) | 64.24(5) | 64.23(4) | 63.52(2) | 61.63(1) |
| wine_red 65.01(2) 65.91(5) 65.83(4) 64.99(1) 65.1 | | slump | 90.11(2) | 90.66(5) | 90.66(4) | 90.11(2) | 86.65(1) |
| Wine_white 72.80(3) 73.93(5) 73.86(4) 72.64(2) 72.64 | | traffic | 46.80(2) | 48.67(5) | 48.55(4) | 46.80(2) | 44.89(1) |
| Avg. Rank (2.72) (4.56) (3.78) (2.50) (1 automobile 29.95(2) 84.91(5) 45.85(4) 21.52(3) 20.4 fertility 10.02(4) 99.46(4) 99.74(2) 104.31(3) 105.1 flow 72.48(2) 79.71(3) 80.92(4) 68.81(1) 92.2 servo 19.63(3) 57.15(5) 36.91(4) 16.30(2) 15.3 slump 70.70(1) 94.69(5) 89.08(4) 72.18(2) 86. traffic 44.49(2) 52.93(5) 45.69(4) 44.69(3) 44.6 wine_red 66.00(3) 67.73(5) 66.57(4) 59.54(2) 57.0 Avg. Rank (2.89) (3.378) (3.44) (2.33) (2.54) fertility 10.71(5) 59.24(2) 92.35(1) 100.86(4) 10.5 forest 105.68(1) 139.21(5) 135.28(4) 120.83(3) 10.3 RF servo 16.01(1) 25.90(5) 20.16(4) 16.43(2) 13.8 | | wine_red | 65.01(2) | 65.91(5) | 65.83(4) | 64.99(1) | 65.09(3) |
| automobile 20.95(2) 84.91(5) 45.85(4) 21.52(3) 20.4 fertility 105.02(4) 99.46(1) 99.74(2) 104.31(3) 105.1 flow 72.48(2) 79.71(3) 80.92(4) 68.81(1) 92. forest 110.37(4) 98.87(1) 99.01(2) 108.14(3) 122.5 SVR servo 19.63(3) 57.15(5) 36.91(4) 16.30(2) 121.5 slump 70.70(1) 94.69(5) 89.08(4) 72.18(2) 86.8 traffic 44.49(2) 52.93(5) 45.69(4) 44.69(3) 44.69(3) wine_red 66.00(3) 67.73(5) 66.57(4) 59.54(2) 57.6 wine_wine_wine 72.74(5) 70.26(4) 68.75(3) 60.55(2) 55.1 Avg. Rank 62.89 (3.78) (3.44) (2.33) (2.33) fertility 107.10(5) 92.99(2) 92.35(1) 100.86(4) 107.7(2) 12.4 fertility 107.10(5) 92.99(2) 92.35(1) 100.86(4) 107.7 forest 105.68(1) 139.21(5) 135.28(4) 120.83(3) 110.8 slump 77.13(5) 68.84(1) 68.86(2) 70.24(3) 72.8 traffic 48.99(5) 44.1(2) 43.65(1) 44.96(3) 48.8 wine_red 59.45(3) 61.94(5) 61.34(4) 56.63(1) 57.1 Avg. Rank 60.71(3) 80.36(5) 67.27(4) 59.23(2) 58.5 Avg. Rank 60.71(3) 80.34(5) 67.27(4) 59.23(2) 58.5 Avg. Rank 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3) 60.71(3 | | ${\bf wine_white}$ | 72.80(3) | 73.93(5) | 73.86(4) | 72.64(2) | 72.64(1) |
| Fertility 105.02(4) 99.46(1) 99.74(2) 104.31(3) 105.5 | Avg. Rank | | (2.72) | (4.56) | (3.78) | (2.50) | (1.44) |
| Flow 72.48 2 79.71(3) 80.92(4) 68.81(1) 92.4 | SVR | automobile | 20.95(2) | 84.91(5) | 45.85(4) | 21.52(3) | 20.43(1) |
| Forest 110.37(4) 98.87(1) 99.01(2) 108.14(3) 122. | | fertility | 105.02(4) | 99.46(1) | 99.74(2) | 104.31(3) | 105.59(5) |
| SVR servo 19.63(3) 87.15(5) 36.91(4) 16.30(2) 15.2 slump 70.70(1) 94.69(5) 89.08(4) 72.18(2) 86.8 traffic 44.49(2) 52.93(5) 45.69(4) 44.69(3) 44.6 wine_red 66.00(3) 67.73(5) 66.57(4) 59.54(2) 57.5 Avg. Rank (2.89) (3.78) (3.44) (2.33) (2.33) fertility 10.71(5) 92.49(2) 92.35(1) 100.86(4) 10.77(2) 12.4 flow 71.22(5) 59.17(1) 59.22(2) 66.38(3) 16.7 forest 105.68(1) 139.21(5) 135.28(4) 120.83(3) 10.2 RF servo 16.01(1) 25.90(5) 20.16(4) 16.43(2) 19.2 slump 77.13(5) 68.84(1) 68.86(2) 70.24(3) 72. raffic 48.99(5) 44.1(2) 43.65(1) 44.96(3) 110. slump 76.13(6) 68.94(1) 68.66(2) | | flow | 72.48(2) | 79.71(3) | 80.92(4) | 68.81(1) | 92.45(5) |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | forest | 110.37(4) | 98.87(1) | 99.01(2) | 108.14(3) | 122.15(5) |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | servo | 19.63(3) | 57.15(5) | 36.91(4) | 16.30(2) | 15.30(1) |
| wine_rdi | | | 70.70(1) | 94.69(5) | 89.08(4) | 72.18(2) | 86.86(3) |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | | traffic | 44.49(2) | 52.93(5) | 45.69(4) | 44.69(3) | 44.05(1) |
| Avg. Rank (2.89) (3.78) (3.44) (2.33) (2.33) automobile 12.89(3) 18.53(5) 16.76(4) 12.77(2) 12.4 fertility 107.10(5) 92.49(2) 92.35(1) 100.86(4) 100.2 flow 71.22(5) 59.17(1) 59.22(2) 66.38(3) 167.3 forest 105.68(1) 139.21(5) 135.28(4) 120.83(3) 110.3 RF servo 16.01(1) 25.90(5) 20.16(4) 16.43(2) 19.9 slump 77.13(5) 68.84(1) 68.86(2) 70.24(3) 72.1 traffic 48.99(5) 44.1(2) 43.65(1) 44.96(3) 42.8 wine_white 60.71(3) 68.03(5) 67.27(4) 59.23(2) 58.8 Avg. Rank (3.44) (3.44) (2.89) (2.56) (5.60) | | wine_red | 66.00(3) | 67.73(5) | 66.57(4) | 59.54(2) | 57.08(1) |
| automobile 12.89(3) 18.53(5) 16.76(4) 12.77(2) 12.4 | | $wine_white$ | 72.74(5) | 70.26(4) | 68.75(3) | 60.55(2) | 55.11 (1) |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Avg. Rank | | (2.89) | (3.78) | (3.44) | (2.33) | (2.56) |
| Flow 71.22(5) 59.17(1) 59.22(2) 66.38(3) 67.5 | RF | automobile | 12.89(3) | 18.53(5) | 16.76(4) | 12.77(2) | 12.49(1) |
| RF Servo 16.01(1) 25.90(5) 135.28(4) 120.83(3) 110.8 | | fertility | 107.10(5) | 92.49(2) | 92.35(1) | 100.86(4) | 100.20(3) |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | flow | 71.22(5) | 59.17(1) | 59.22(2) | 66.38(3) | 67.87(4) |
| slump 77.13(5) 68.84(1) 68.86(2) 70.24(3) 72.1 traffic 48.99(5) 44.41(2) 43.65(1) 44.96(3) 48.8 wine.red 59.45(3) 61.94(5) 61.34(4) 56.03(1) 57.1 wine.white 60.71(3) 68.03(5) 67.27(4) 59.23(2) 58.5 Avg. Rank (3.34) (3.44) (3.44) (3.44) (3.89) (2.56) | | forest | 105.68(1) | 139.21(5) | 135.28(4) | 120.83(3) | 110.52(2) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | servo | 16.01(1) | 25.90(5) | 20.16(4) | 16.43(2) | 19.42(3) |
| wine_red wine_white 59.45(3) 61.94(5) 61.34(4) 56.63(1) 67.27(4) 59.23(2) 58.9 57.3 Avg. Rank (3.44) (3.44) (2.89) (2.56) (2.56) (2.56) | | slump | 77.13(5) | 68.84(1) | 68.86(2) | 70.24(3) | 72.14(4) |
| wine_white 60.71(3) 68.03(5) 67.27(4) 59.23(2) 58.9 Avg. Rank (3.44) (3.44) (2.89) (2.56) (3.44) | | traffic | 48.99(5) | 44.41(2) | 43.65(1) | 44.96(3) | 48.36(4) |
| Avg. Rank (3.44) (3.44) (2.89) (2.56) (3.44) | | | 59.45(3) | 61.94(5) | 61.34(4) | 56.63(1) | 57.15(2) |
| | | $wine_white$ | 60.71(3) | 68.03(5) | 67.27(4) | 59.23(2) | 58.97(1) |
| M D 1 (2.02) (2.02) (2.27) (2.46) (6 | Avg. Rank | | (3.44) | (3.44) | (2.89) | (2.56) | (2.67) |
| Mean Rank (3.02) (3.93) (3.37) (2.46) (2 | Mean Rank | | (3.02) | (3.93) | (3.37) | (2.46) | (2.22) |

Table 1: The 3-fold cross validation relative mean squared error and Friedman ranks for all the datasets when Best, BEM, IEW, Caruana, BST(ICM) and BST(ICM) Reg, taking into account some baseline systems (Ridge, SVR and RF) and the GS sampling strategy.