

Table 1: The Scott-Knott ranks ( $r$ ) on the MRE, and the median and interquartile range of MRE, denoted as Med (IQR), of DaL under different local models and their global counterparts. The green cells denote the one with the best rank over all the approaches.

System	Size	DaL		DNN		DaL <sub>RF</sub>		RF		DaL <sub>DT</sub>		DT		DaL <sub>LR</sub>		LR		DaL <sub>SVR</sub>		SVR		DaL <sub>KRR</sub>		KRR		DaL <sub>LNN</sub>		KNN	
		r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)	r	Med (IQR)
APACHE	Size 1	1	21.02 (6.64)	2	20.19 (6.34)	1	21.39 (5.01)	3	21.20 (7.72)	2	21.61 (6.69)	2	20.85 (12.99)	1	19.71 (6.80)	5	27.72 (4.98)	4	23.30 (4.08)	4	22.67 (3.66)	6	36.95 (3.77)	7	49.97 (14.23)	2	21.71 (4.97)	2	22.09 (3.33)
	Size 2	2	9.82 (5.39)	1	9.79 (4.56)	2	10.66 (5.81)	2	12.02 (6.58)	2	10.41 (5.04)	1	10.06 (3.05)	1	7.102 (7.55)	5	17.61 (2.41)	6	17.59 (3.76)	7	20.31 (3.18)	8	34.87 (4.66)	9	34.72 (3.83)	4	13.73 (4.61)	6	18.64 (2.56)
	Size 3	1	7.17 (2.67)	2	7.98 (1.91)	3	7.93 (3.15)	2	7.65 (14.46)	4	9.10 (1.31)	4	9.03 (1.13)	1	7.42 (2.14)	7	16.16 (1.41)	6	15.92 (2.45)	9	18.50 (1.54)	10	25.88 (4.60)	11	33.54 (2.80)	5	11.60 (1.49)	8	17.30 (1.39)
	Size 4	2	6.59 (1.77)	2	6.85 (1.00)	3	6.96 (1.32)	2	6.63 (1.19)	5	7.97 (1.35)	4	7.81 (1.35)	1	6.39 (1.16)	8	16.12 (0.78)	7	13.89 (2.35)	9	18.57 (1.58)	10	22.79 (1.77)	11	32.31 (1.38)	6	11.00 (1.44)	8	15.64 (1.46)
	Size 5	2	5.96 (2.07)	4	6.66 (1.61)	4	6.51 (1.41)	3	6.43 (1.11)	5	7.63 (1.00)	5	7.71 (1.03)	1	5.75 (0.55)	9	16.12 (1.37)	7	12.63 (1.76)	10	17.82 (1.78)	11	21.79 (2.07)	12	32.11 (1.43)	6	10.45 (1.28)	8	14.75 (1.41)
BDBC-C	Size 1	2	41.77 (32.54)	2	43.66 (42.88)	2	58.22 (37.41)	6	253.78 (93.63)	1	47.20 (19.75)	1	36.17 (9.11)	3	65.09 (37.30)	8	698.12 (713.51)	3	65.38 (22.26)	4	154.71 (52.45)	2	64.22 (15.94)	7	231.74 (136.07)	3	68.32 (34.34)	5	201.51 (70.38)
	Size 2	1	17.22 (15.67)	1	18.17 (8.11)	3	30.69 (29.47)	4	73.41 (118.30)	1	16.81 (8.59)	7	19.61 (7.19)	7	49.04 (47.11)	6	545.48 (149.70)	5	70.56 (64.18)	5	117.87 (49.95)	4	43.14 (41.44)	6	280.15 (96.55)	5	78.59 (42.86)	6	245.08 (180.15)
	Size 3	2	5.74 (6.84)	5	12.47 (4.08)	4	15.30 (6.90)	4	18.64 (19.42)	3	6.72 (5.82)	1	7.44 (3.70)	6	29.00 (78.81)	9	465.51 (91.79)	8	65.69 (155.89)	7	97.22 (52.60)	6	26.43 (70.74)	9	283.32 (99.54)	8	58.12 (121.53)	9	279.13 (144.62)
	Size 4	1	3.68 (2.78)	3	9.06 (9.76)	3	9.40 (3.63)	4	11.32 (6.77)	2	4.15 (2.78)	2	5.74 (3.97)	5	24.55 (4.18)	9	441.04 (85.57)	6	51.04 (29.64)	6	93.39 (41.17)	5	23.34 (4.86)	8	295.23 (47.23)	6	60.43 (18.64)	7	258.59 (144.43)
	Size 5	1	2.15 (1.52)	3	7.08 (8.03)	2	6.87 (3.29)	4	6.64 (3.35)	1	3.24 (3.09)	1	3.32 (2.50)	4	22.88 (3.78)	9	456.02 (78.01)	6	46.18 (19.08)	7	105.14 (56.61)	5	22.11 (3.66)	9	316.72 (43.94)	6	56.42 (16.71)	8	178.91 (128.49)
BDB-J	Size 1	2	3.14 (2.90)	2	2.98 (3.34)	2	5.05 (5.05)	3	8.36 (10.48)	1	2.98 (0.81)	1	3.03 (0.99)	9	5.31 (2.96)	8	43.23 (6.15)	6	22.77 (17.72)	4	12.93 (3.37)	3	6.42 (9.07)	7	34.58 (4.94)	5	20.31 (7.60)	5	24.03 (7.11)
	Size 2	4	1.90 (0.37)	3	1.91 (0.68)	1	1.79 (0.35)	1	1.82 (0.29)	3	2.05 (0.33)	2	1.99 (0.29)	4	3.77 (0.49)	10	37.85 (6.27)	8	15.28 (12.28)	5	10.54 (0.97)	4	3.74 (0.67)	9	32.28 (6.74)	6	12.00 (4.59)	7	14.07 (6.61)
	Size 3	2	1.61 (0.31)	3	2.01 (1.10)	1	1.58 (0.27)	1	1.57 (0.21)	2	1.92 (0.27)	2	1.87 (0.35)	3	3.41 (0.46)	8	37.61 (3.49)	6	15.03 (10.36)	5	11.03 (0.89)	3	3.32 (0.55)	7	32.51 (3.83)	4	9.42 (3.95)	4	9.06 (2.44)
	Size 4	2	1.61 (0.29)	4	1.70 (0.37)	1	1.41 (0.21)	1	1.43 (0.21)	3	1.67 (0.29)	3	1.69 (0.36)	4	3.57 (0.66)	9	37.57 (3.48)	8	9.20 (5.36)	8	11.25 (1.35)	5	3.51 (0.58)	9	33.14 (3.69)	7	5.99 (6.08)	6	5.85 (2.05)
	Size 5	2	1.46 (0.26)	4	1.69 (0.48)	1	1.40 (0.28)	1	1.40 (0.23)	3	1.67 (0.43)	3	1.68 (0.39)	4	3.23 (0.65)	9	37.48 (2.86)	7	8.21 (3.87)	8	11.51 (2.21)	5	3.19 (0.63)	9	34.15 (3.03)	6	3.68 (1.40)	6	3.74 (0.92)
x264	Size 1	1	8.04 (1.30)	1	8.04 (3.06)	3	8.72 (2.49)	2	8.18 (2.78)	3	8.78 (4.06)	3	8.77 (2.89)	4	10.43 (3.40)	5	14.36 (4.34)	5	14.31 (2.24)	9	25.72 (2.91)	8	24.55 (5.85)	6	19.75 (10.27)	4	11.81 (1.31)	7	18.40 (1.66)
	Size 2	1	3.21 (1.95)	1	3.17 (1.00)	3	6.50 (1.18)	3	6.42 (1.20)	3	6.50 (1.63)	2	3.65 (2.34)	4	8.01 (1.23)	7	9.92 (2.44)	9	18.83 (5.32)	4	7.53 (3.80)	5	8.35 (1.40)	6	9.45 (1.53)	8	15.63 (2.24)		
	Size 3	1	1.66 (0.57)	2	2.23 (0.90)	5	4.92 (0.92)	4	4.74 (0.91)	4	4.72 (0.73)	4	4.72 (0.73)	5	7.61 (0.76)	6	7.13 (3.03)	9	13.66 (2.32)	5	5.10 (1.65)	7	7.69 (0.80)	8	8.95 (1.75)	9	13.83 (3.45)		
	Size 4	1	1.13 (0.63)	2	1.74 (0.98)	5	4.07 (0.75)	6	4.04 (0.86)	3	3.32 (1.09)	4	3.65 (1.03)	3	2.92 (2.05)	7	7.34 (0.39)	6	7.15 (2.95)	10	10.24 (1.41)	8	3.66 (1.82)	8	7.29 (0.51)	9	8.24 (1.51)	11	12.53 (2.12)
	Size 5	1	0.79 (0.33)	2	1.44 (0.90)	5	2.88 (0.76)	6	2.98 (0.77)	3	1.97 (0.88)	4	2.37 (1.11)	6	2.74 (2.18)	8	7.17 (0.60)	8	3.62 (3.02)	11	9.19 (0.76)	7	3.06 (1.89)	9	7.09 (0.71)	10	7.45 (1.07)	12	11.48 (1.54)
HSMGP	Size 1	1	4.66 (1.32)	8	7.09 (3.04)	6	16.99 (2.70)	5	16.63 (2.10)	7	21.65 (2.31)	7	21.34 (2.41)	2	7.72 (0.87)	11	55.91 (19.98)	4	16.00 (2.48)	5	16.63 (1.38)	3	8.63 (1.15)	10	39.60 (11.07)	8	26.22 (2.77)	9	33.80 (9.19)
	Size 2	1	2.66 (0.68)	2	3.69 (0.61)	5	11.53 (1.37)	8	11.46 (1.78)	8	15.59 (1.41)	8	16.43 (1.52)	2	7.35 (0.47)	10	52.54 (10.70)	7	15.24 (1.32)	8	16.30 (2.16)	4	7.43 (0.64)	10	43.28 (9.80)	9	22.77 (3.64)	9	21.71 (3.19)
	Size 3	1	1.56 (0.20)	2	2.28 (0.37)	4	7.38 (0.56)	5	7.58 (0.67)	7	11.35 (0.63)	7	11.26 (0.98)	2	7.14 (0.35)	10	51.38 (9.85)	6	10.05 (0.86)	9	15.03 (0.66)	3	7.13 (0.30)	10	47.42 (9.96)	8	14.19 (1.59)	8	14.27 (1.63)
	Size 4	1	1.49 (0.15)	2	2.23 (0.39)	3	6.63 (0.55)	4	6.88 (0.61)	7	10.13 (0.57)	8	10.14 (0.72)	4	7.16 (0.17)	11	49.63 (9.43)	6	8.95 (0.90)	10	15.07 (0.56)	5	7.16 (0.22)	11	45.84 (9.11)	9	12.83 (0.87)	9	12.83 (1.15)
	Size 5	1	1.16 (0.08)	2	1.94 (0.63)	3	5.13 (0.25)	3	5.15 (0.28)	7	7.46 (0.46)	6	7.43 (0.34)	10	7.15 (0.20)	9	49.05 (3.00)	4	5.87 (0.52)	8	8.60 (0.38)	5	7.14 (0.21)	10	45.16 (2.81)	9	9.26 (0.58)	9	9.26 (0.65)
HIPA <sup>cc</sup>	Size 1	1	9.07 (1.18)	2	9.70 (1.28)	3	11.48 (0.85)	3	11.08 (0.66)	4	12.03 (0.93)	4	12.07 (1.06)	9	12.70 (1.22)	8	20.49 (1.61)	5	13.06 (0.51)	7	14.84 (0.62)	4	12.17 (0.77)	9	17.76 (1.12)	6	14.10 (1.22)	8	16.86 (1.22)
	Size 2	1	5.55 (0.60)	2	6.89 (1.44)	3	8.37 (0.61)	3	8.46 (0.70)	3	8.47 (1.10)	3	8.20 (1.00)	6	11.64 (0.35)	10	19.67 (0.83)	5	11.27 (0.44)	6	14.52 (0.54)	5	11.36 (0.31)	8	18.27 (0.65)	4	11.07 (0.37)	7	16.02 (0.69)
	Size 3	1	4.39 (0.41)	2	4.68 (0.90)	3	6.75 (0.42)	3	6.69 (0.51)	3	6.62 (0.80)	3	6.60 (0.75)	5	11.43 (0.34)	11	19.35 (0.72)	5	10.78 (0.28)	8	14.48 (0.57)	6	11.21 (0.41)	10	18.80 (0.84)	4	9.79 (0.41)	9	15.79 (0.66)
	Size 4	1	3.22 (0.35)	2	3.58 (1.00)	4	4.56 (0.33)	4	4.47 (0.32)	3	4.42 (0.22)	3	4.31 (0.44)	8	11.13 (0.25)	11	18.97 (0.46)	7	10.31 (0.14)	10	12.06 (0.25)	8	11.03 (0.25)	11	18.34 (0.52)	5	8.14 (0.36)	5	7.95 (0.32)
	Size 5	1	2.39 (0.22)	2	2.82 (0.57)	3	2.71 (0.09)	2	2.69 (0.13)	2	2.69 (0.15)	2	2.70 (0.17)	10	11.01 (0.15)	12	18.81 (0.37)	7	10.04 (0.09)	8	10.52 (0.24)	9	10.93 (0.12)	11	18.48 (0.34)	5	5.77 (0.37)	6	6.20 (0.59)
VP8	Size 1	1	1.59 (0.36)	5	4.68 (3.27)	4	3.19 (0.59)	6	3.32 (0.79)	2	2.57 (0.70)	3	2.47 (0.70)	5	12.72 (0.84)	7	43.69 (5.81)	9	13.84 (0.76)	10	22.37 (3.68)	7	12.48 (0.87)	12	32.53 (3.29)	10	22.76 (2.40)	11	23.86 (1.87)
	Size 2	4	1.21 (0.09)	5	2.39 (1.21)	3	1.41 (0.18)	1	1.45 (0.16)	1	1.24 (0.24)	2	1.30 (0.22)	4	12.42 (0.44)	8	42.04 (3.16)	6	10.30 (0.49)	11	23.53 (1.46)	7	12.26 (0.51)	12	34.52 (2.16)	9	20.95 (1.45)	10	21.62 (1.59)
	Size 3	1	1.12 (0.08)	2	1.93 (0.72)	2	1.15 (0.15)	2	1.16 (0.16)	2	1.15 (0.12)	3	1.18 (0.21)	5	12.41 (0.34)	11	42.65 (2.99)	5	10.11 (0.36)	9	25.02 (1.93)	6	12.28 (0.42)	10	36.18 (2.01)	8	20.46 (1.19)	8	20.46 (1.41)
	Size 4	1	1.10 (0.06)	2	1.54 (0.40)	2	1.02 (0.08)	2	1.03 (0.11)	2	1.07 (0.08)	2	1.09 (0.08)	3	12.35 (0.31)	8	42.08 (2 (												