caluvw_celuvw

Modeler	Config	model	total cost	percent cost	Adj. R²
sparse	**F16**	$+ 56.193 + -2.648\text{x}10^{-05}*(p^{1.33333})*\log_2(p) + 5.352\text{x}10^{-07}*(size^{1.75})$	1333107.07	100.00	0.91
	C16	$+ 40.371 + 0.160*(p^{0.333333})*\log_2(p) + 5.500\text{x}10^{-07}*(size^{1.75})$	1333107.07	100.00	0.91
	F1	$+ -113.000 + 0.013*(p^{1.33333})*\log_2(p) + 6.507\text{x}10^{-07}*(size^{1.75})$	400504.59	30.04	0.97
	C1	$+ 16.506 + 0.235*(p^{0.333333})*\log_2(p) + 7.399\text{x}10^{-07}*(size^{1.75})$	514622.43	38.60	1.00
	F0	$+ -220.125 + 0.019*(p^{1.33333})*\log_2(p) + 7.436\text{x}10^{-07}*(size^{1.75})$	399232.04	29.95	0.99
	C0	$+ 12.707 + 0.276*(p^{0.333333})*\log_2(p) + 7.418\text{x}10^{-07}*(size^{1.75})$	508951.22	38.18	1.00

Each Modeler config uses 9 base points. F stands for "First points found" selection strategy. C stands for "cheap points" selection strategy. The number is the amount of additional points used for modeling.
The cost for each kernel is the same as we used the same measurement points to model all of them.
Since the modeler selection strategy for the base points is messed up "F" are actually the cheapest points and the others are more expensive.

caluvw_sipsol

Modeler	Config	model	total cost	percent cost	Adj. R²
sparse	F16	$+ -21.235 + 2.390*(p^{0.5}) + 2.471 \times 10^{-05}*(size)*\log_2^2(size)$	1333107.07	100.00	0.85
	C16	$+ -20.374 + 8.458 \times 10^{-06}*(p^{0.25})*(size)*\log_2^2(size)$	1333107.07	100.00	0.99
	F1	$+ -711.911 + 47.164*(p^{0.5}) + 3.136 \times 10^{-05}*(size)*\log_2^2(size)$	400504.59	30.04	0.97
	C1	$+ -53.658 + 7.614*(p^{0.25}) + 3.484 \times 10^{-05}*(size)*\log_2^2(size)$	514622.43	38.60	1.00
	F0	$+ -900.755 + 55.166*(p^{0.5}) + 3.448 \times 10^{-05}*(size)*\log_2^2(size)$	399232.04	29.95	0.99
	C0	$+ -42.972 + 5.971*(p^{0.25}) + 3.471 \times 10^{-05}*(size)*\log_2^2(size)$	508951.22	38.18	1.00

Each Modeler config uses 9 base points. F stands for "First points found" selection strategy. C stands for "cheap points" selection strategy. The number is the amount of additional points used for modeling.
The cost for each kernel is the same as we used the same measurement points to model all of them.
Since the modeler selection strategy for the base points is messed up "F" are actually the cheapest points and the others are more expensive.

calcp_celp2

Modeler	Config	model	total cost	percent cost	Adj. R²
sparse	F16	$+ 40.084 + -7.941\text{x}10^{-06}*(p^{1.33333})*\log_2(p) + 6.235\text{x}10^{-05}*(size^{1.33333})$	1333107.07	100.00	0.91
	C16	$+ 40.245 + -1.583\text{x}10^{-11}*(p^3)*\log_2(p) + 6.230\text{x}10^{-05}*(size^{1.33333})$	1333107.07	100.00	0.91
	F1	$+ -70.539 + 9.025\text{x}10^{-03}*(p^{1.33333})*\log_2(p) + 7.230\text{x}10^{-05}*(size^{1.33333})$	400504.59	30.04	0.94
	C1	$+ 19.596 + 6.692\text{x}10^{-12}*(p^3)*\log_2(p) + 7.248\text{x}10^{-05}*(size^{1.33333})$	514622.43	38.60	0.92
	F0	$+ -204.378 + 0.017*(p^{1.33333})*\log_2(p) + 8.760\text{x}10^{-05}*(size^{1.33333})$	399232.04	29.95	1.00
	C0	$+ 10.780 + 1.516\text{x}10^{-11}*(p^3)*\log_2(p) + 8.781\text{x}10^{-05}*(size^{1.33333})$	508951.22	38.18	1.00

Each Modeler config uses 9 base points. F stands for "First points found" selection strategy. C stands for "cheap points" selection strategy. The number is the amount of additional points used for modeling.
The cost for each kernel is the same as we used the same measurement points to model all of them.
Since the modeler selection strategy for the base points is messed up "F" are actually the cheapest points and the others are more expensive.

calcp_sipsol

Modeler	Config	model	total cost	percent cost	Adj. R²
sparse	F16	$+ -57.346 + 3.342*(p^{0.5}) + 3.384\text{x}10^{-05}*(size)*\log_2^2(size)$	1333107.07	100.00	0.86
	C16	$+ -52.353 + 1.153\text{x}10^{-05}*(p^{0.25})*(size)*\log_2^2(size)$	1333107.07	100.00	0.99
	F1	$+ -980.188 + 63.514*(p^{0.5}) + 4.272\text{x}10^{-05}*(size)*\log_2^2(size)$	400504.59	30.04	0.96
	C1	$+ -50.483 + 1.188\text{x}10^{-05}*(p^{0.25})*(size)*\log_2^2(size)$	514622.43	38.60	1.00
	F0	$+ -1235.500 + 74.332*(p^{0.5}) + 4.693\text{x}10^{-05}*(size)*\log_2^2(size)$	399232.04	29.95	0.99
	C0	$+ -92.384 + 12.034*(p^{0.25}) + 4.730\text{x}10^{-05}*(size)*\log_2^2(size)$	508951.22	38.18	1.00

Each Modeler config uses 9 base points. F stands for "First points found" selection strategy. C stands for "cheap points" selection strategy. The number is the amount of additional points used for modeling.
The cost for each kernel is the same as we used the same measurement points to model all of them.
Since the modeler selection strategy for the base points is messed up "F" are actually the cheapest points and the others are more expensive.

Model overview using the cheapest points:

caluvw_celuvw	$+ 56.193 + -2.648\text{x}10^{-05}*(p^{1.33333})*\log_2(p) + 5.352\text{x}10^{-07}*(\text{size}^{1.75})$
caluvw_sipsol	$-21.235 + 2.390*(p^{0.5}) + 2.471\text{x}10^{-05}*(\text{size})*\log_2{}^2(\text{size})$
calcp_celp2	$+ 40.084 + -7.941\text{x}10^{-06}*(p^{1.33333})*\log_2(p) + 6.235\text{x}10^{-05}*(\text{size}^{1.33333})$
calcp_sipsol	$-57.346 + 3.342*(p^{0.5}) + 3.384\text{x}10^{-05}*(\text{size})*\log_2{}^2(\text{size})$

Model overview using expensive points:

caluvw_celuvw	$+ 40.371 + 0.160*(p^{0.333333})*\log_2(p) + 5.500\text{x}10^{-07}*(\text{size}^{1.75})$
caluvw_sipsol	$+ -20.374 + 8.458\text{x}10^{-06}*(p^{0.25})*(\text{size})*\log_2{}^2(\text{size})$
calcp_celp2	$+ 40.245 + -1.583\text{x}10^{-11}*(p^3)*\log_2(p) + 6.230\text{x}10^{-05}*(\text{size}^{1.33333})$
calcp_sipsol	$+ -52.353 + 1.153\text{x}10^{-05}*(p^{0.25})*(\text{size})*\log_2{}^2(\text{size})$

Model overview using the heuristic strategy (cheap points +1):

Kernel	Model	Cost %	R^2	Metric
caluvw_celuvw	+ -113.000 + 0.013*$(p^{1.33333})$*$\log_2(p)$ + 6.507x10^{-07}*$(size^{1.75})$	30.04	0.967	Time [seconds]
caluvw_sipsol	+ -711.911 + 47.164*$(p^{0.5})$ + 3.136x10^{-05}*$(size)$*$\log_2^2(size)$	30.04	0.969	Time [seconds]
calcp_celp2	+ -70.539 + 9.025x10^{-03}*$(p^{1.33333})$*$\log_2(p)$ + 7.230x10^{-05}*$(size^{1.33333})$	30.04	0.939	Time [seconds]
calcp_sipsol	+ -980.188 + 63.514*$(p^{0.5})$ + 4.272x10^{-05}*$(size)$*$\log_2^2(size)$	30.04	0.963	Time [seconds]