# GPTIPS pareto front report

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Config file: Y7_config.m

Number of models on front: 6

Total models: 100

This report shows the expressional complexity/performance characteristics (on training data) of symbolic models on the pareto front.

Numerical precision is reduced for display purposes.

Click on column headers to sort models by expressional complexity and goodness of fit ($R^2$).

| Model ID | Goodness of fit ($R^2$) | Model complexity | Model |
|---|---|---|---|
| 4 | 0.985 | 245 | $6.05\ x_2 - 0.295\ x_1 - 0.0372\ x_3 - 0.0397\ x_4 + 0.335\ x_1\ x_2 + 5.38e\text{-}6\ x_1\ x_3 + 3.49e\text{-}4\ x_1\ x_4 + 3.86e\text{-}4\ x_2\ x_3 + 3.97e\text{-}4\ x_2\ x_4 + 3.14e\text{-}4\ x_3\ x_4 - 0.023\ x_1\ x_2^2 - 5.26e\text{-}5\ x_2\ x_4^2 + 1.58e\text{-}5\ x_1^2 - 5.38e\text{-}6\ x_3^2 + 5.38e\text{-}6\ x_1\ x_2\ x_4 - 2.12e\text{-}5\ x_2\ x_3\ x_4 + 0.193$ |
| 19 | 0.986 | 284 | $10.2\ x_2 - 0.257\ x_1 - 0.0137\ x_3 + 0.0171\ x_4 + 0.243\ x_1\ x_2 - 6.34e\text{-}4\ x_1\ x_3 - 0.00397\ x_1\ x_4 - 0.00387\ x_2\ x_3 - 0.00319\ x_2\ x_4 + 7.15e\text{-}4\ x_3\ x_4 - 0.0216\ x_1\ x_2^2 - 1.8e\text{-}4\ x_1^2\ x_2 - 1.2e\text{-}4\ x_2\ x_4^2 + 0.00385\ x_1^2 - 2.59e\text{-}6\ x_3^2 + 9.02e\text{-}5\ x_1\ x_2\ x_3 + 6.4e\text{-}4\ x_1\ x_2\ x_4 - 7.46e\text{-}5\ x_2\ x_3\ x_4 + 0.438$ |
| 56 | 0.985 | 193 | $5.89\ x_2 - 0.309\ x_1 - 0.0336\ x_3 - 0.0336\ x_4 + 0.342\ x_1\ x_2 + 6.85e\text{-}6\ x_1\ x_3 - 1.27e\text{-}4\ x_2\ x_3 - 1.13e\text{-}4\ x_2\ x_4 + 3.14e\text{-}4\ x_3\ x_4 - 0.0233\ x_1\ x_2^2 - 5.25e\text{-}5\ x_2\ x_4^2 + 9.59e\text{-}6\ x_1^2 - 6.85e\text{-}6\ x_3^2 + 6.85e\text{-}6\ x_1\ x_2\ x_4 - 1.64e\text{-}5\ x_2\ x_3\ x_4 + 0.186$ |
| 62 | 0.985 | 260 | $5.41\ x_2 - 0.349\ x_1 - 0.0447\ x_3 - 0.0442\ x_4 + 0.351\ x_1\ x_2 + 6.25e\text{-}6\ x_1\ x_3 - 3.51e\text{-}5\ x_1\ x_4 + 0.00223\ x_2\ x_3 + 0.00224\ x_2\ x_4 + 4.67e\text{-}4\ x_3\ x_4 - 0.0244\ x_1\ x_2^2 + 4.59e\text{-}6\ x_1^2\ x_2 - 7.82e\text{-}5\ x_2\ x_4^2 + 0.00123\ x_2^2\ x_4 + 3.29e\text{-}4\ x_1^2 - 6.25e\text{-}6\ x_3^2 - 4.59e\text{-}6\ x_1\ x_2\ x_3 + 6.25e\text{-}6\ x_1\ x_2\ x_4 - 4.39e\text{-}5\ x_2\ x_3\ x_4 + 0.163$ |
| 69 | 0.986 | 268 | $11.0\ x_2 - 0.237\ x_1 - 0.0143\ x_3 + 0.0157\ x_4 + 0.225\ x_1\ x_2 - 6.27e\text{-}4\ x_1\ x_3 - 0.00389\ x_1\ x_4 - 0.00383\ x_2\ x_3 - 0.00317\ x_2\ x_4 + 7.07e\text{-}4\ x_3\ x_4 - 0.0215\ x_1\ x_2^2 - 8.94e\text{-}5\ x_1^2\ x_2 - 1.18e\text{-}4\ x_2\ x_4^2 + 0.00369\ x_1^2 - 2.5e\text{-}6\ x_2^2 - 2.5e\text{-}6\ x_3^2 + 8.94e\text{-}5\ x_1\ x_2\ x_3 + 6.27e\text{-}4\ x_1\ x_2\ x_4 - 7.34e\text{-}5\ x_2\ x_3\ x_4 + 0.496$ |
| 81 | 0.986 | 262 | $10.8\ x_2 - 0.225\ x_1 - 0.0152\ x_3 + 0.0153\ x_4 + 0.225\ x_1\ x_2 - 6.19e\text{-}4\ x_1\ x_3 - 0.00387\ x_1\ x_4 - 0.00373\ x_2\ x_3 - 0.00308\ x_2\ x_4 + 7.06e\text{-}4\ x_3\ x_4 - 0.0215\ x_1\ x_2^2 - 8.84e\text{-}5\ x_1^2\ x_2 - 1.18e\text{-}4\ x_2\ x_4^2 + 0.00359\ x_1^2 - 2.46e\text{-}6\ x_3^2 + 8.84e\text{-}5\ x_1\ x_2\ x_3 + 6.24e\text{-}4\ x_1\ x_2\ x_4 - 7.33e\text{-}5\ x_2\ x_3\ x_4 + 0.471$ |

GPTIPS - the symbolic data mining platform for MATLAB