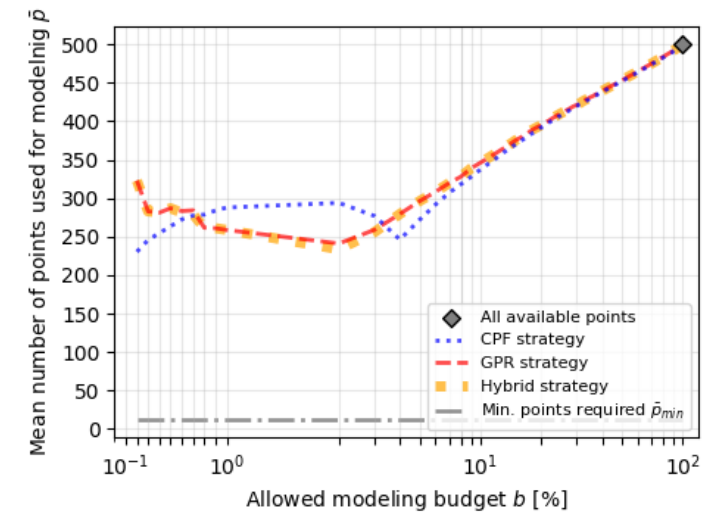
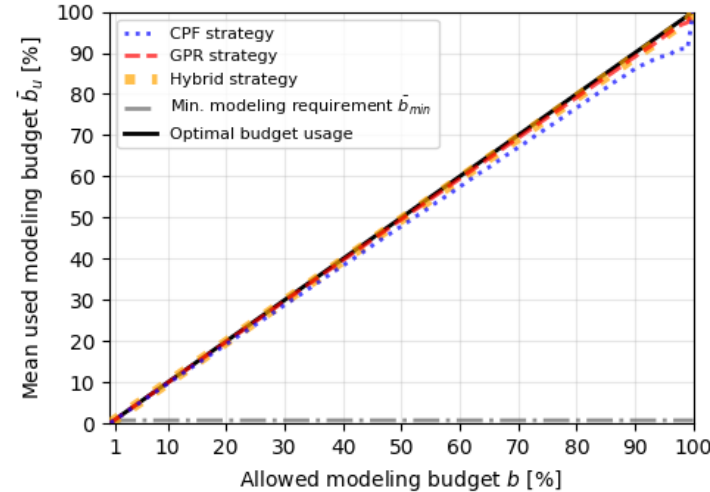
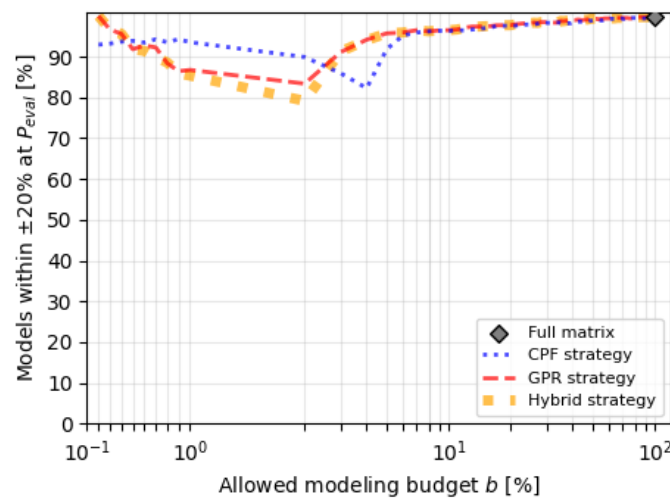
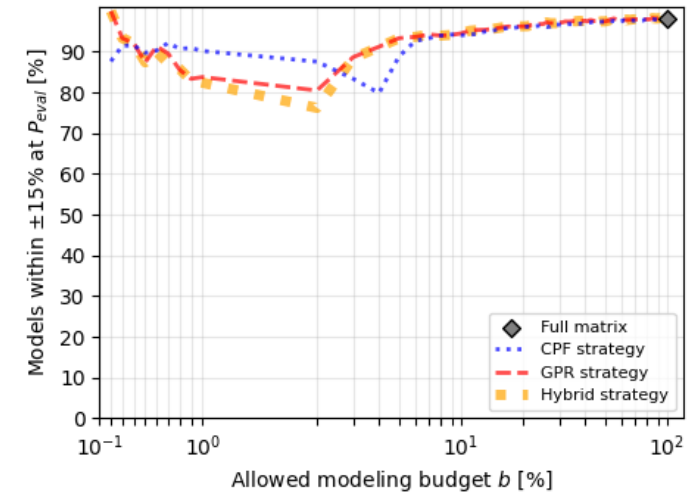
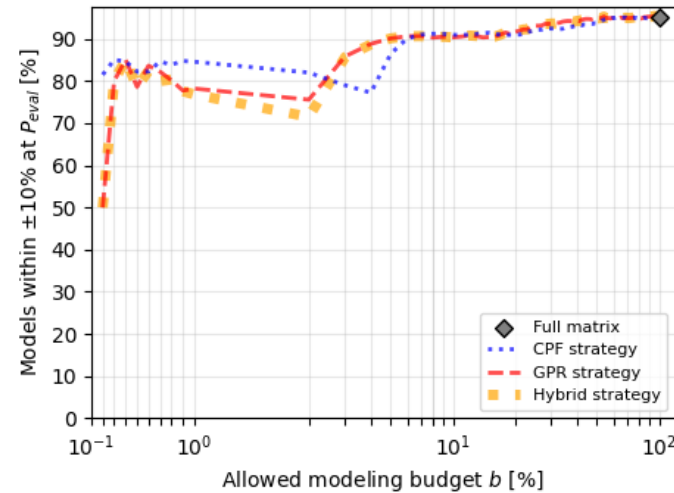
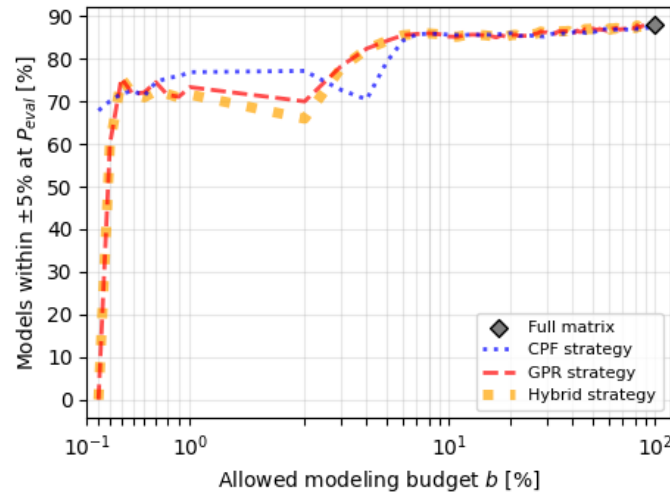


Grid Search for best configuration of GPR strategy

3 parameter, 1% noise

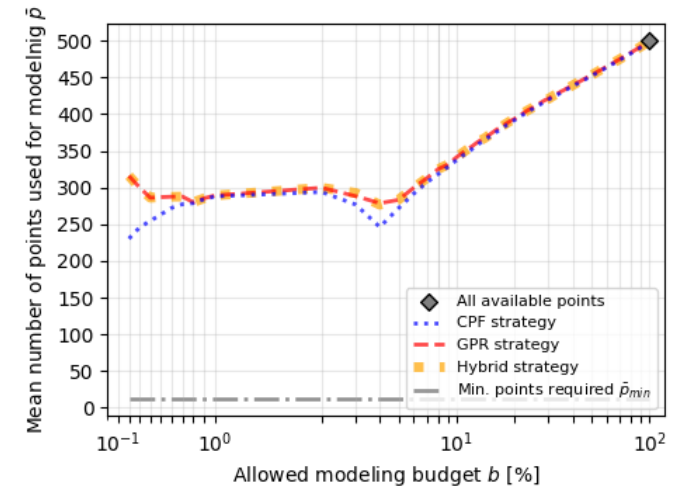
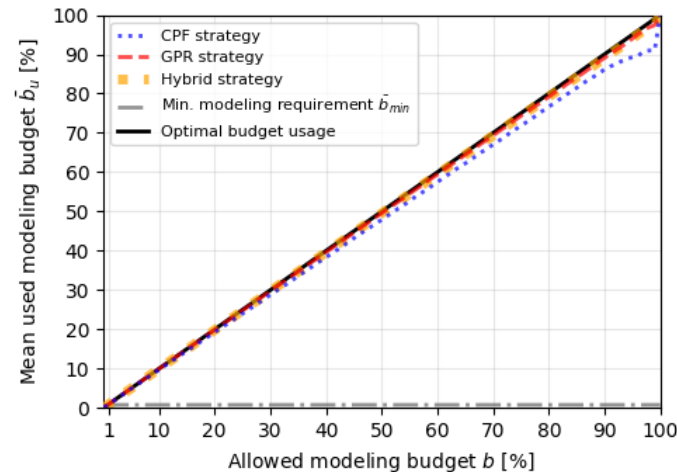
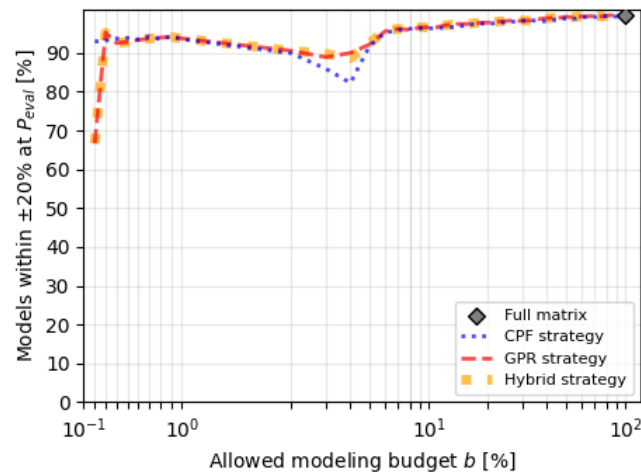
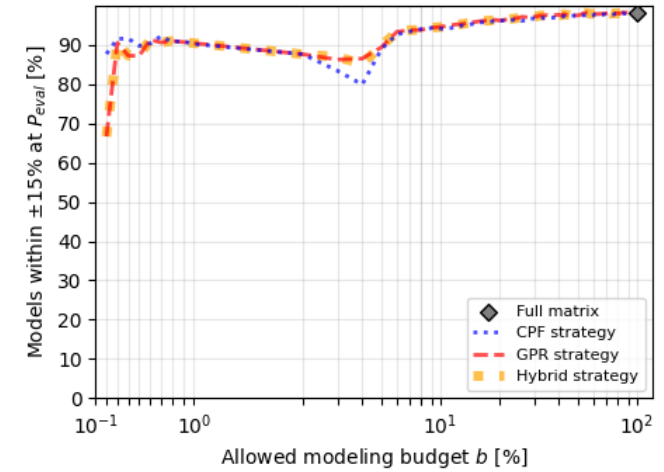
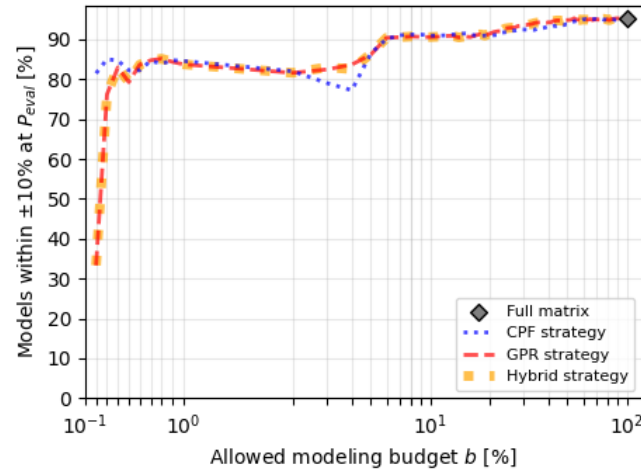
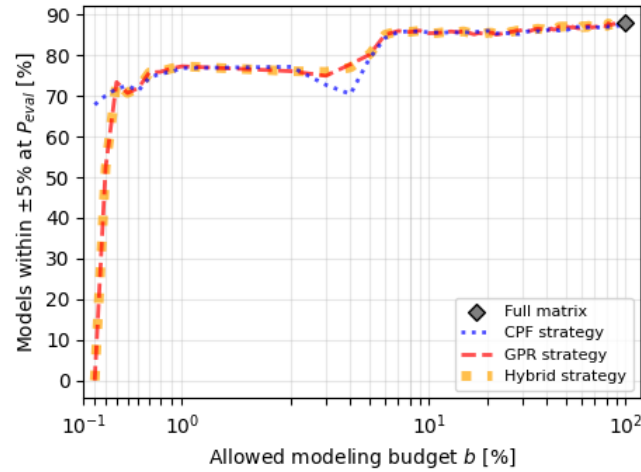
Config 1: hybrid switch=40, grid search=3

Evaluation results $m = 2, n = \pm 1\%$



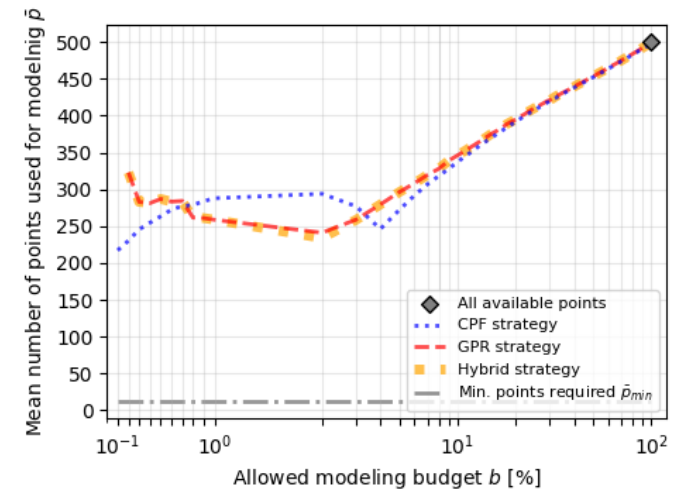
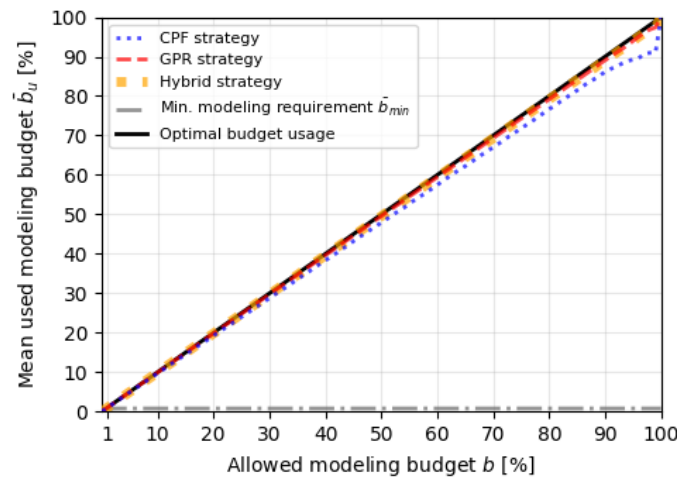
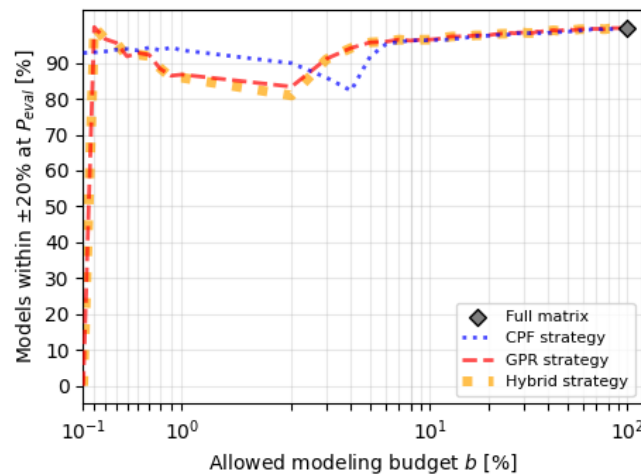
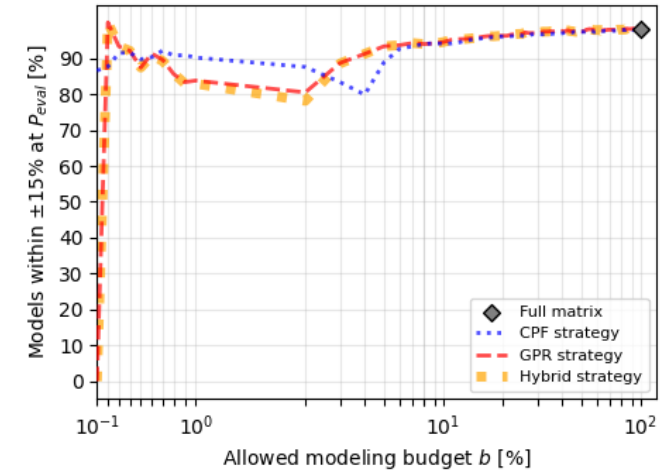
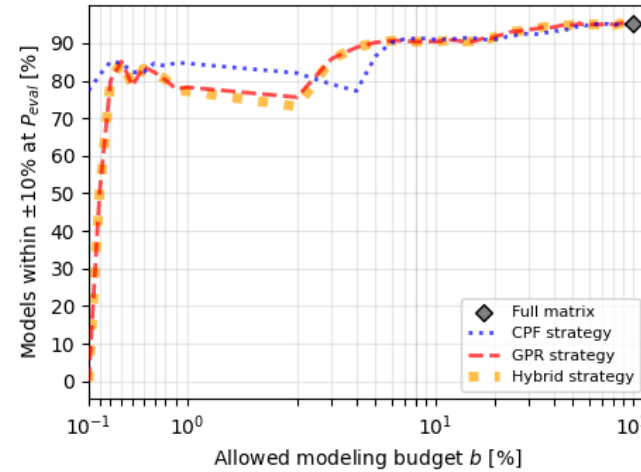
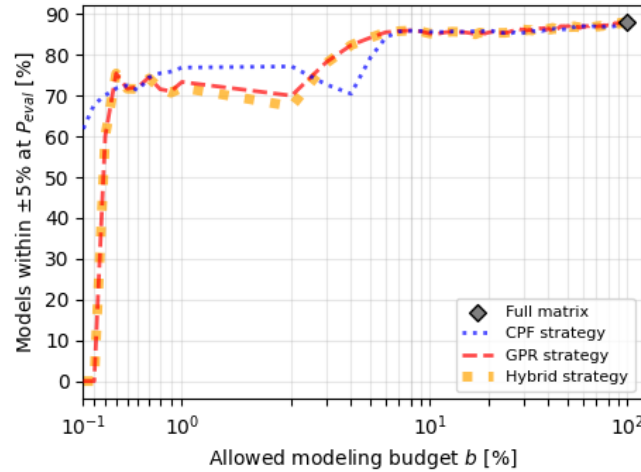
Config 2: hybrid_switch=20, grid search=4

Evaluation results $m = 2, n = \pm 1\%$



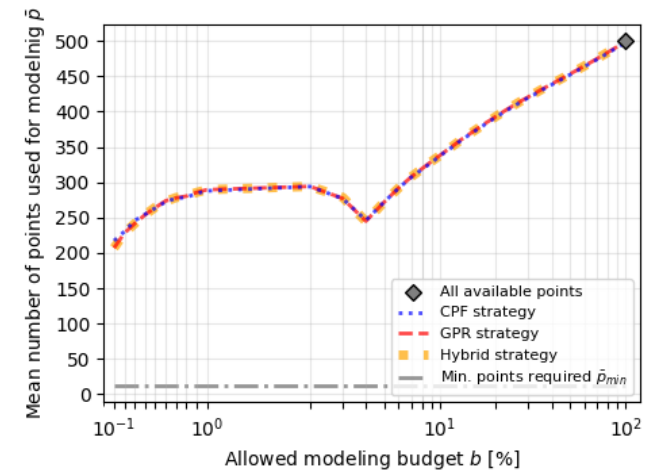
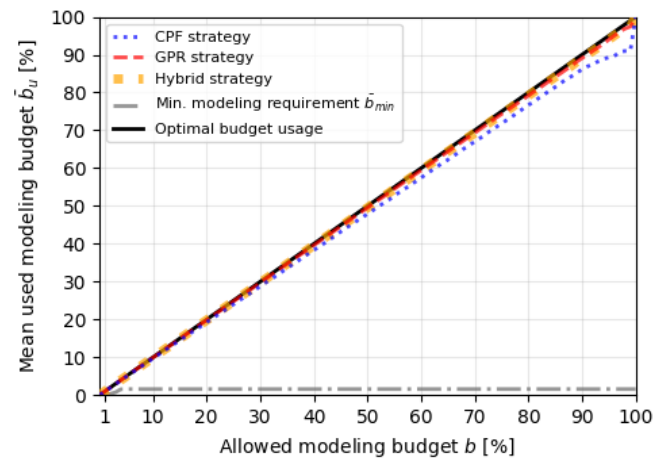
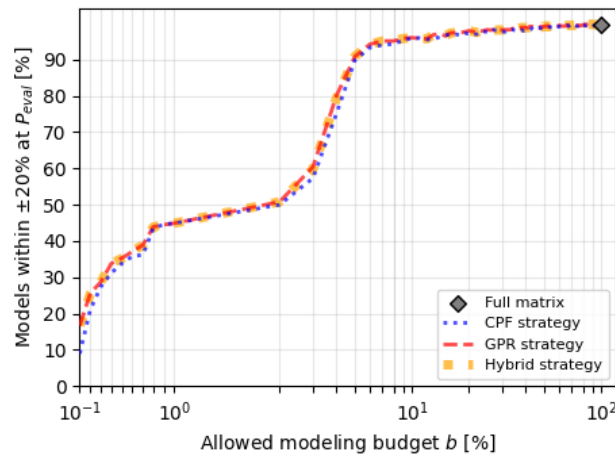
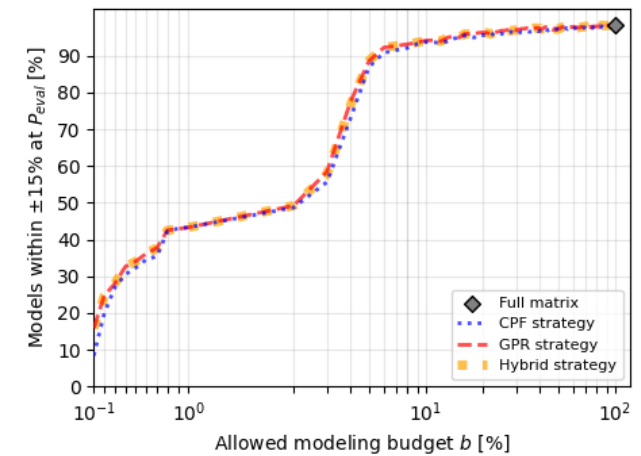
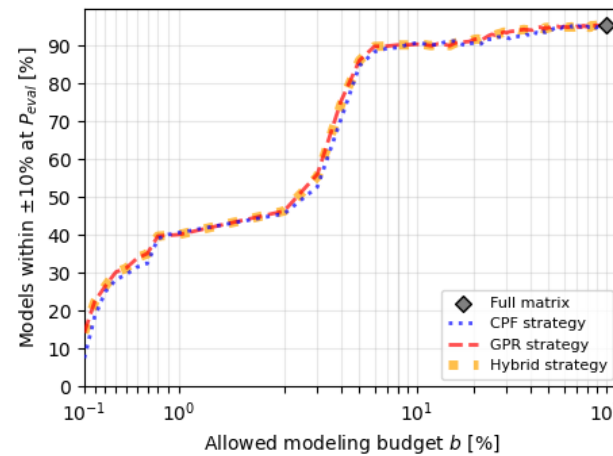
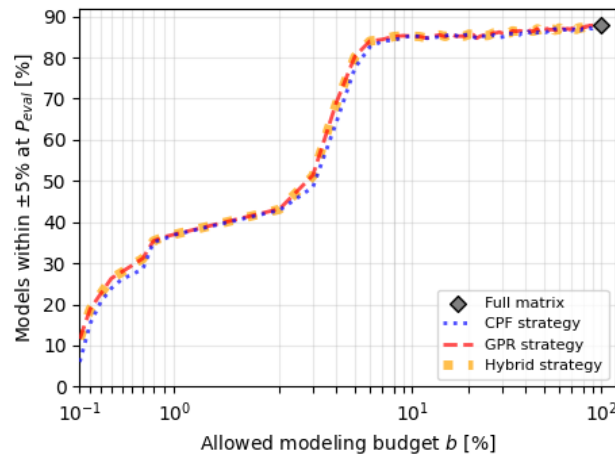
Config 3: hybrid_switch=20, grid search=3

Evaluation results $m = 2, n = \pm 1\%$



Config 5: hybrid_switch=20, grid search=4, fixed cost calc. for strategies

Evaluation results $m = 2, n = \pm 1\%$

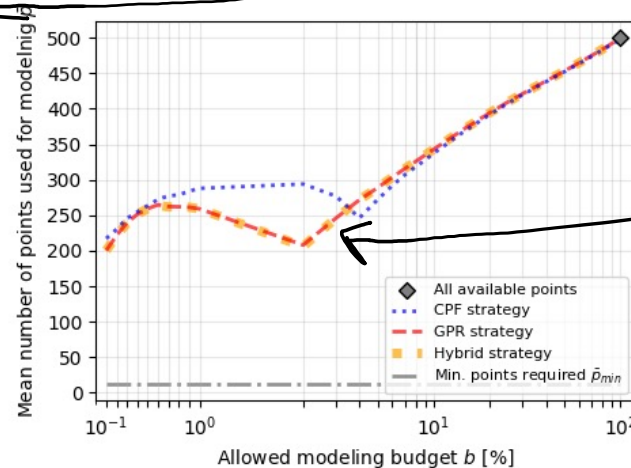
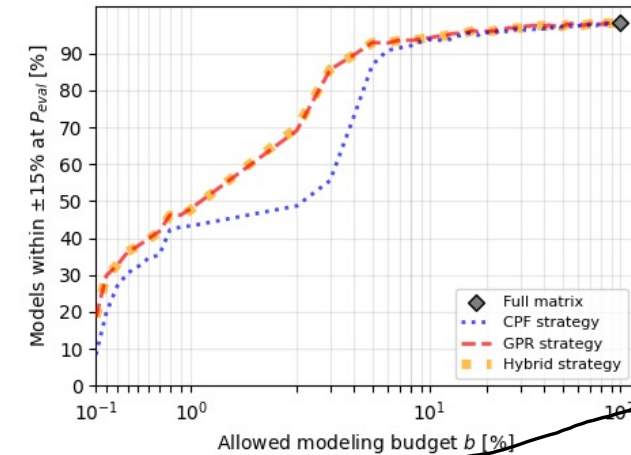
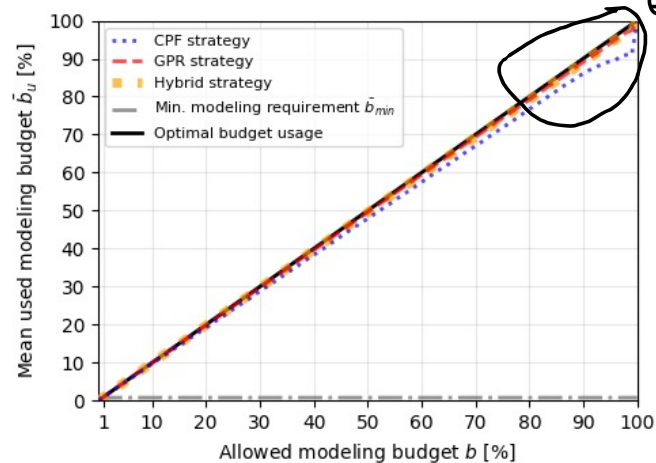
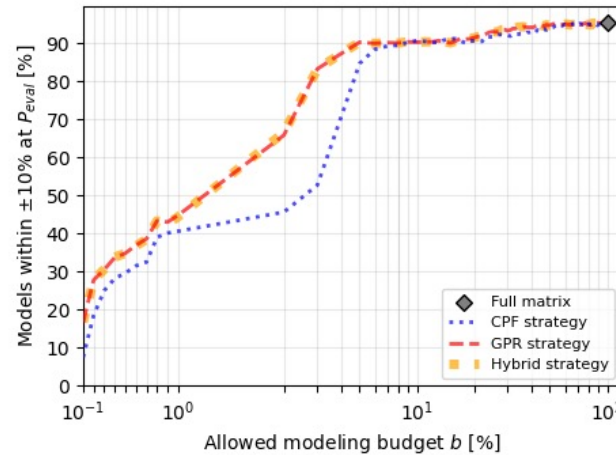
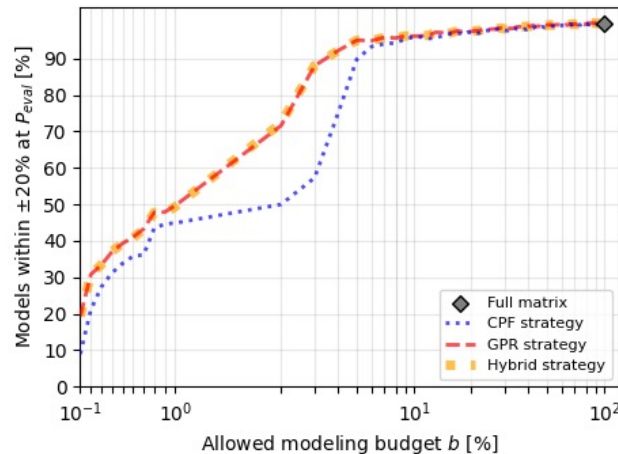
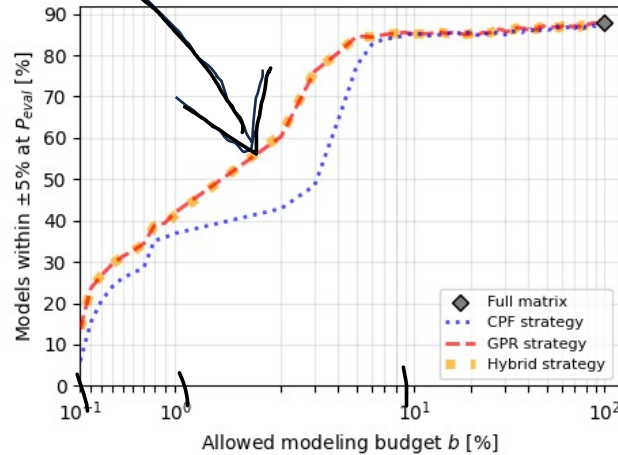


Config 4: hybrid_switch=20, grid search=3, fixed cost calc. for strategies

Evaluation results $m = 2, n = \pm 1\%$

The GPR strategy can create models in scenarios where the CPF cant because of its higher base cost. Additionally it provides higher accuracy models, especially in the range from 0.1 to 10% budget.

This is true for all accuracy buckets. The are just generally more models in the larger buckets than in the smaller ones.



GPR and Hybrid strat use the available budget more optimally as shown in the budget plot.

As shown in the point plot, the GPR start uses overall or almost always less points than the CPF strat, but the chosen points are more expensive and impactful on model accuracy, as shown by the improved model accuracy results.

Conclusion

- Config 4 is the best, now with the fixed cost calculation code we can really see that the GPR, Hybrid strategy perform much better at low budgets than the CFP strat...
- Found same results for other noise levels (2,5,10%) config 4 is the best.