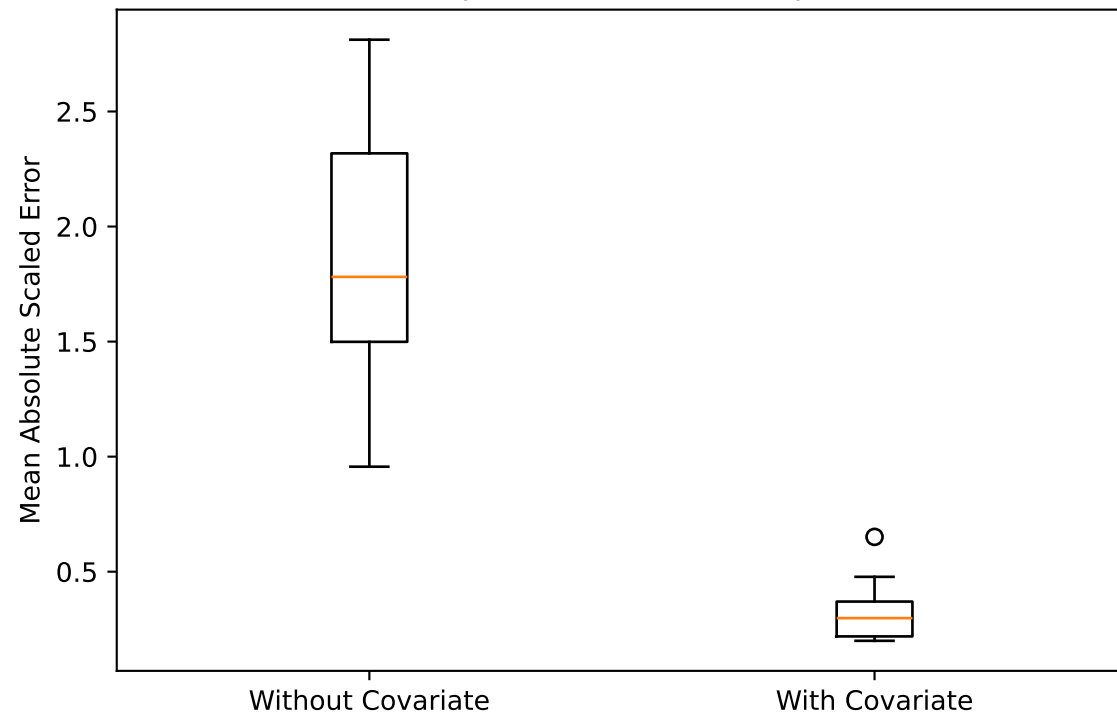
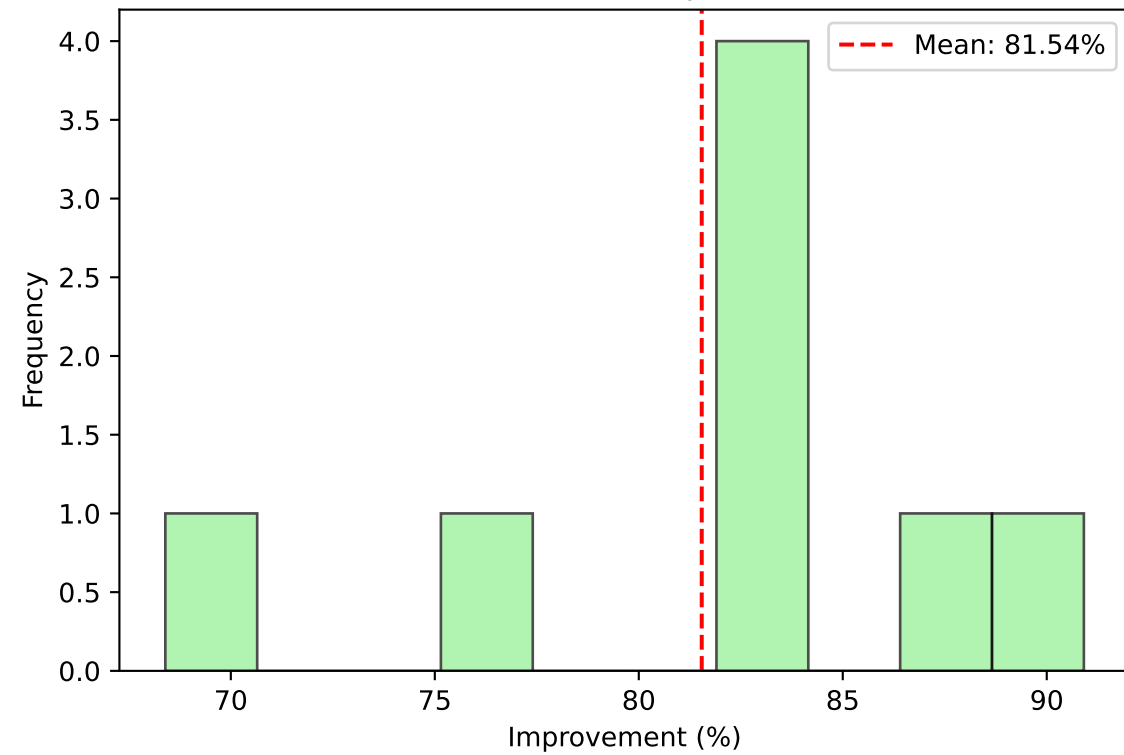


Covariate Study Summary: Ar1, Pulses, Steps, Ramps

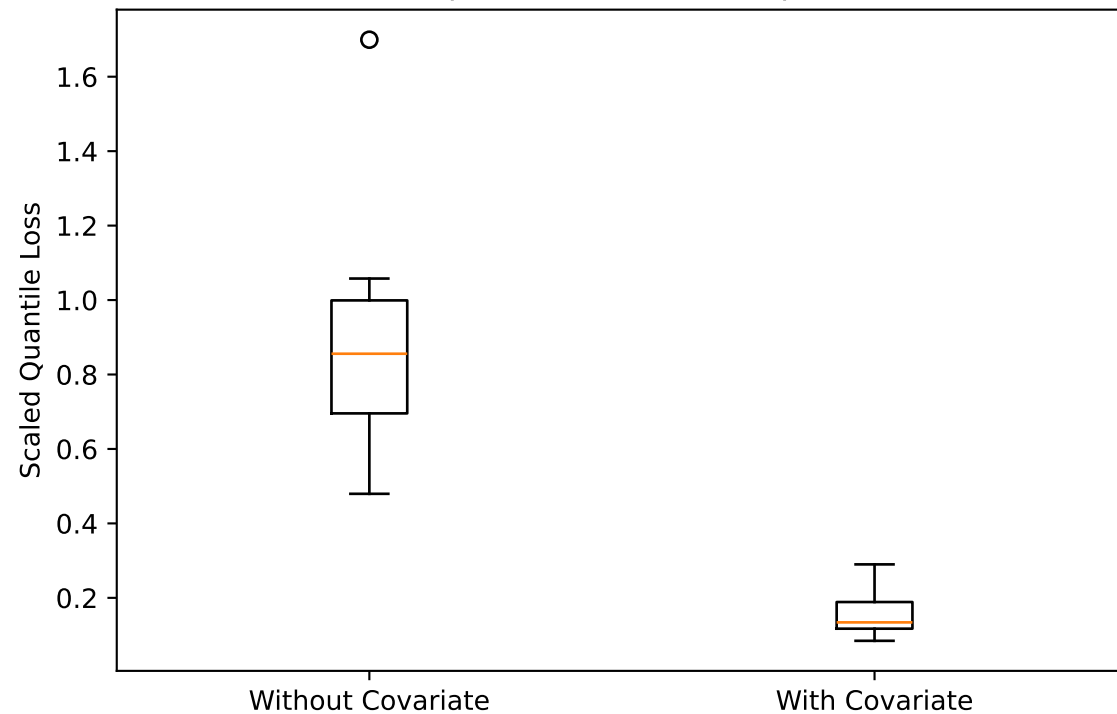
MASE Comparison Across All Experiments



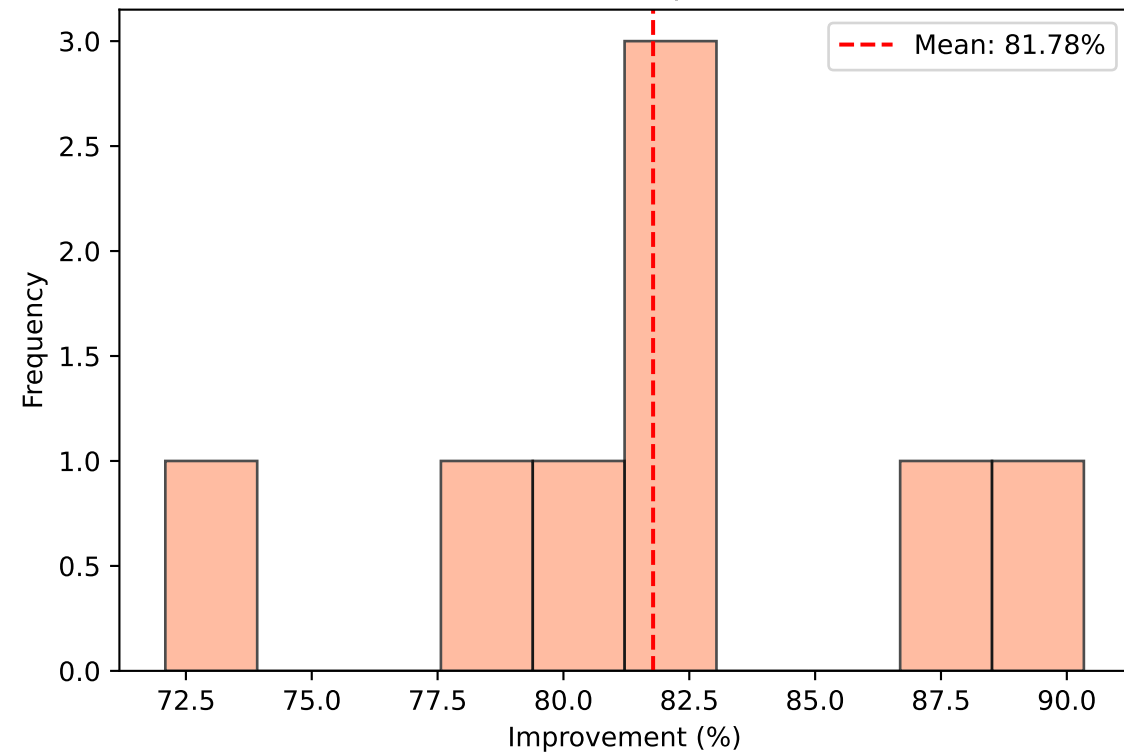
Distribution of MASE Improvements (%)



SQL Comparison Across All Experiments



Distribution of SQL Improvements (%)



Detailed Statistics

Covariate Study Detailed Results

Covariate Types: ar1, pulses, steps, ramps

Number of Experiments: 8

MASE Results:

- Without Covariate: 1.8805 ± 0.6111
- With Covariate: 0.3358 ± 0.1462
- Average Improvement: 81.54%
- Median Improvement: 82.16%

SQL Results:

- Without Covariate: 0.9034 ± 0.3525
- With Covariate: 0.1580 ± 0.0635
- Average Improvement: 81.78%
- Median Improvement: 81.78%

Study Parameters:

- Weight: 1.0
- Relation: multiplicative
- Train Ratio: 0.6
- Covariate Weights: Randomized per experiment (Dirichlet distribution)

Best Performing Experiment (MASE):

- Experiment 1: 90.91% improvement

Worst Performing Experiment (MASE):

- Experiment 5: 68.39% improvement