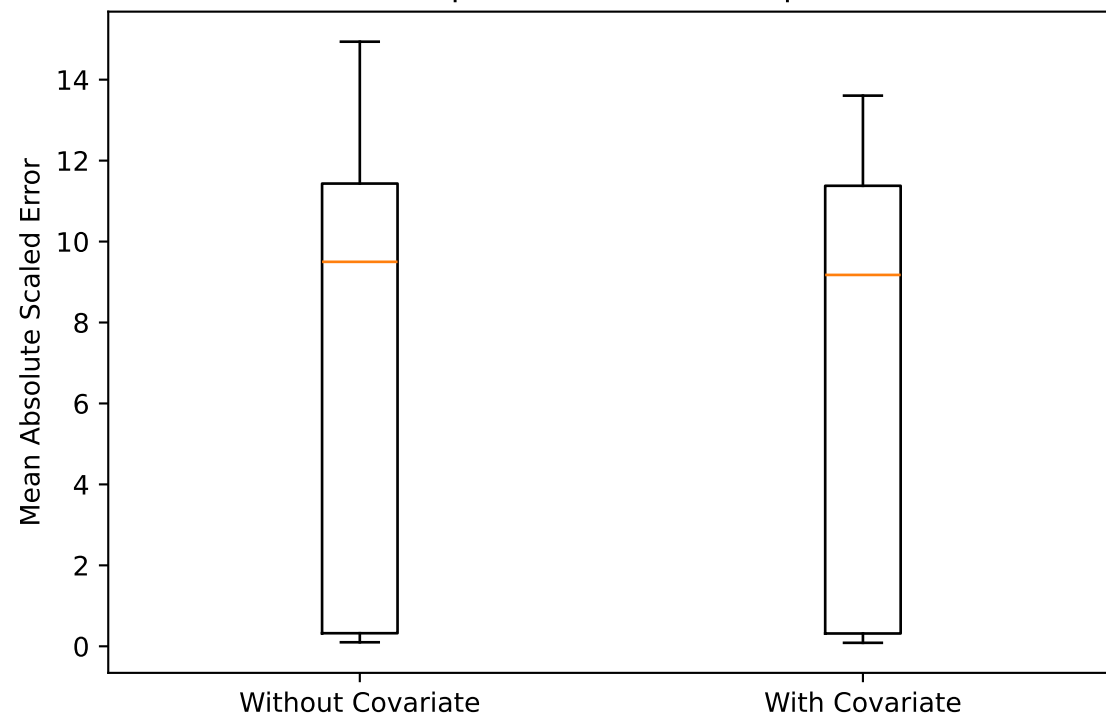
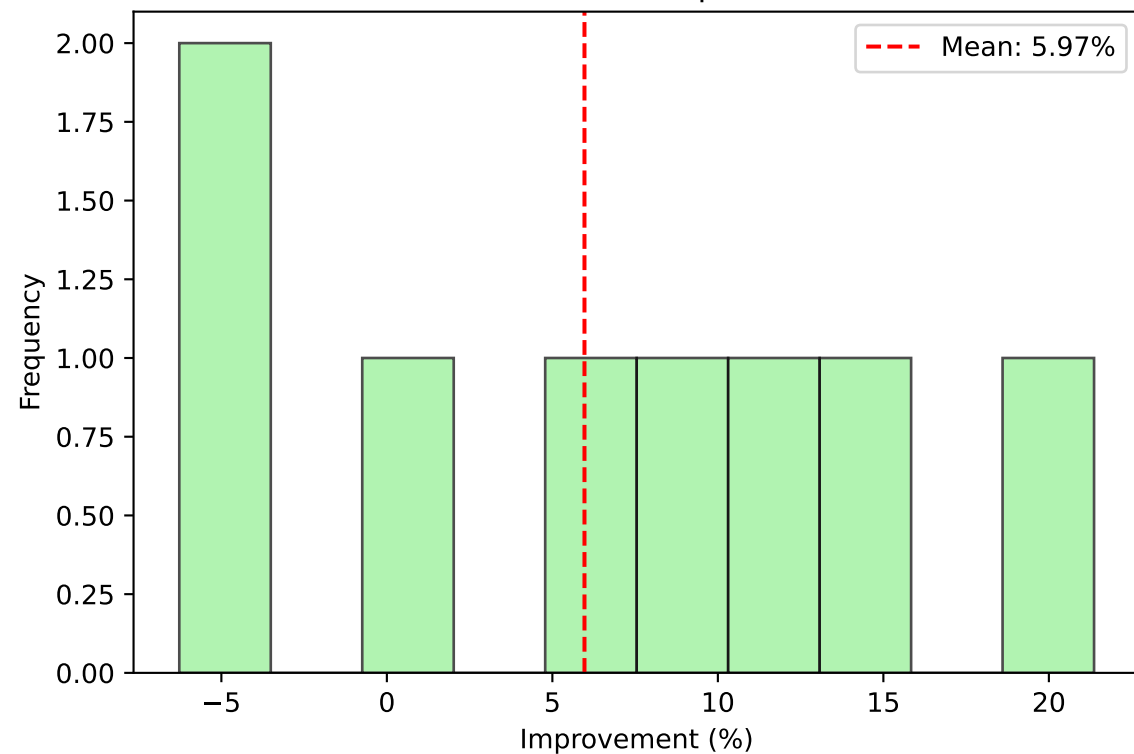


Covariate Study Summary: Steps

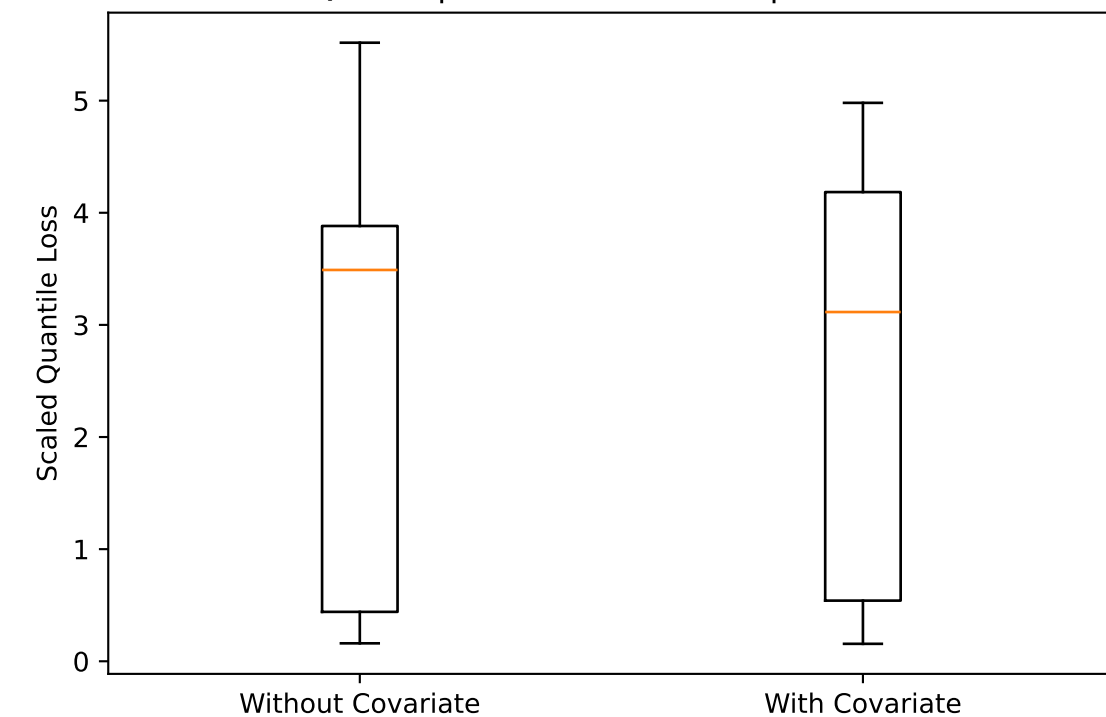
MASE Comparison Across All Experiments



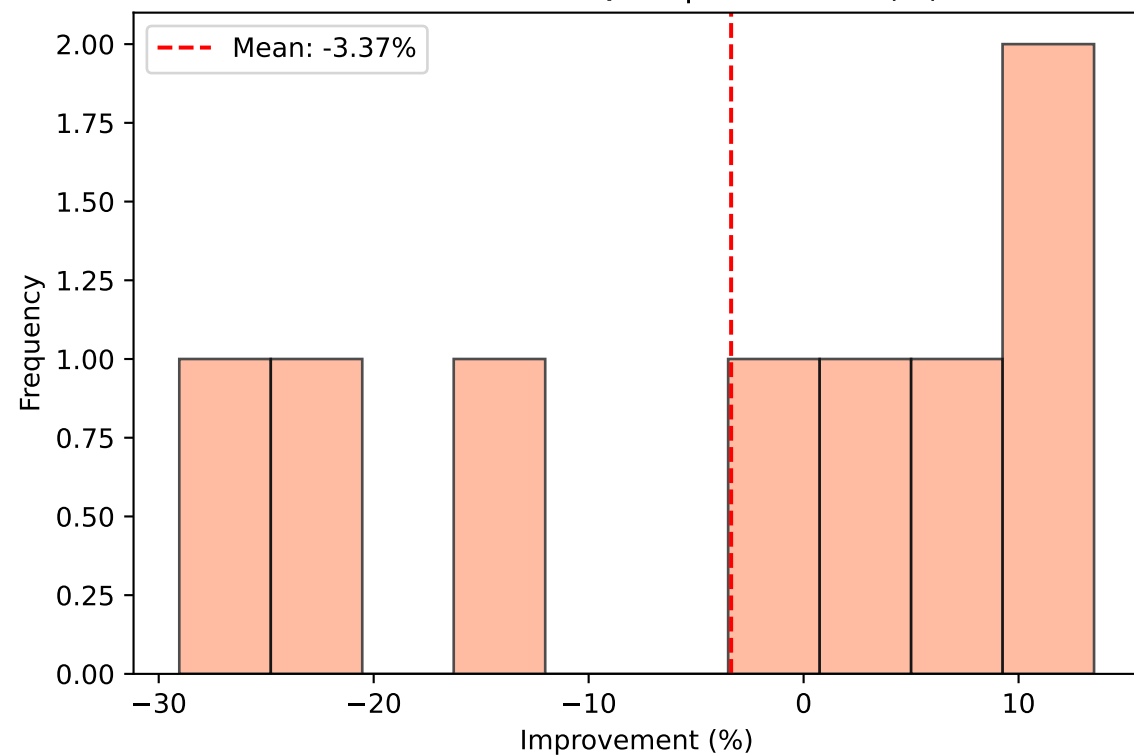
Distribution of MASE Improvements (%)



SQL Comparison Across All Experiments



Distribution of SQL Improvements (%)



Detailed Statistics

Covariate Study Detailed Results

Covariate Types: steps

Number of Experiments: 8

MASE Results:

- Without Covariate: 7.2072 ± 5.6604
- With Covariate: 7.0027 ± 5.5031
- Average Improvement: 5.97%
- Median Improvement: 7.42%

SQL Results:

- Without Covariate: 2.7128 ± 1.9494
- With Covariate: 2.6269 ± 1.8300
- Average Improvement: -3.37%
- Median Improvement: 1.48%

Study Parameters:

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

Best Performing Experiment (MASE):

- Experiment 2: 21.37% improvement

Worst Performing Experiment (MASE):

- Experiment 5: -6.27% improvement