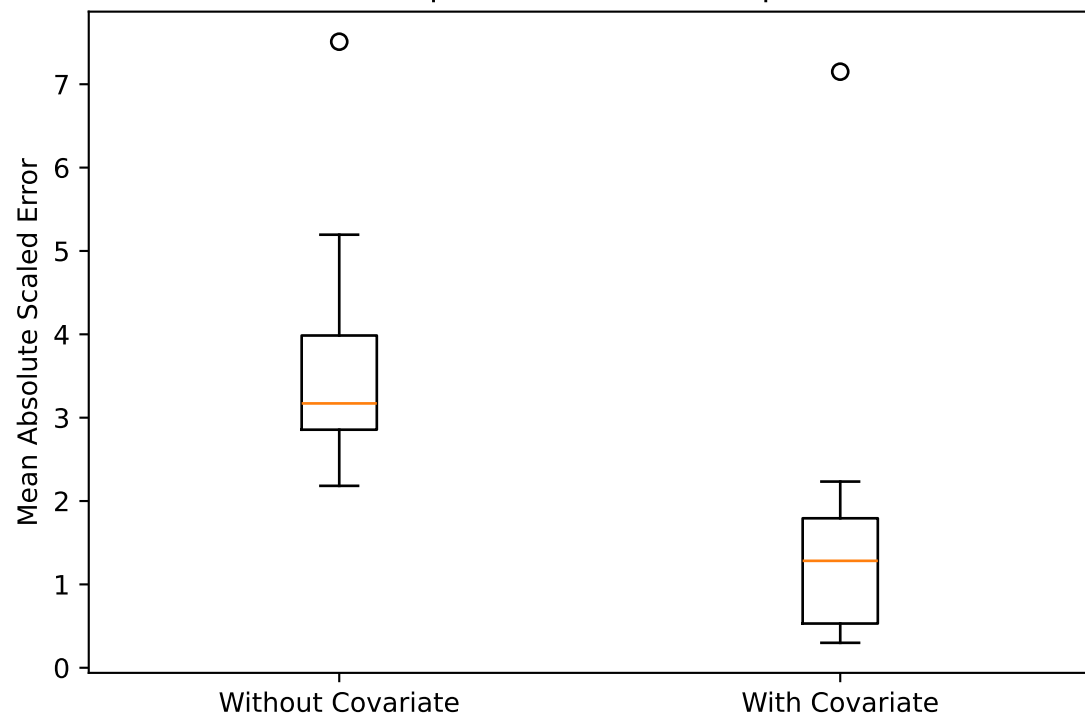# Covariate Study Summary: Random Walk
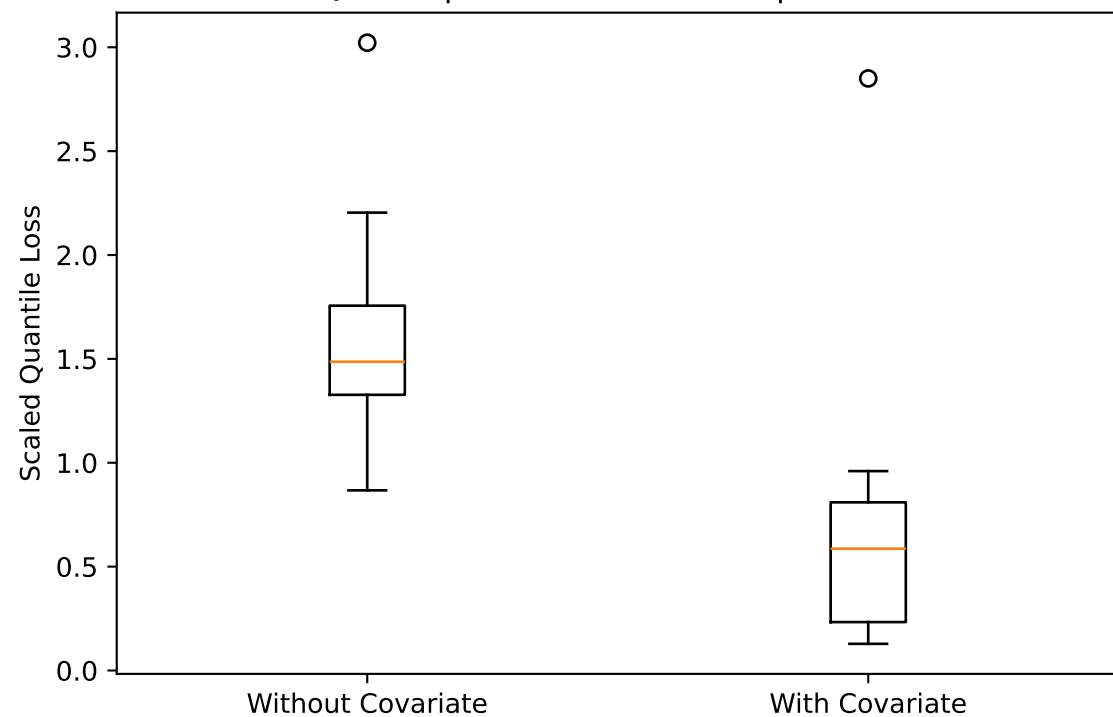

MASE Comparison Across All Experiments
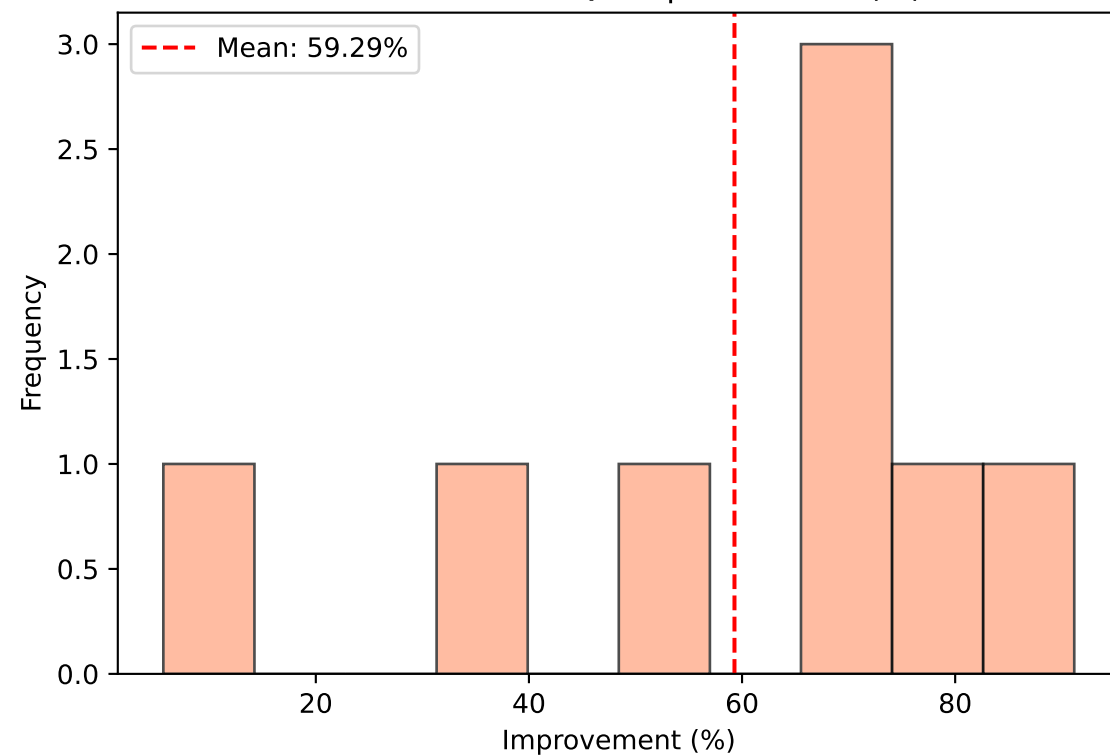
Distribution of MASE Improvements (%)

Mean: 59.59%
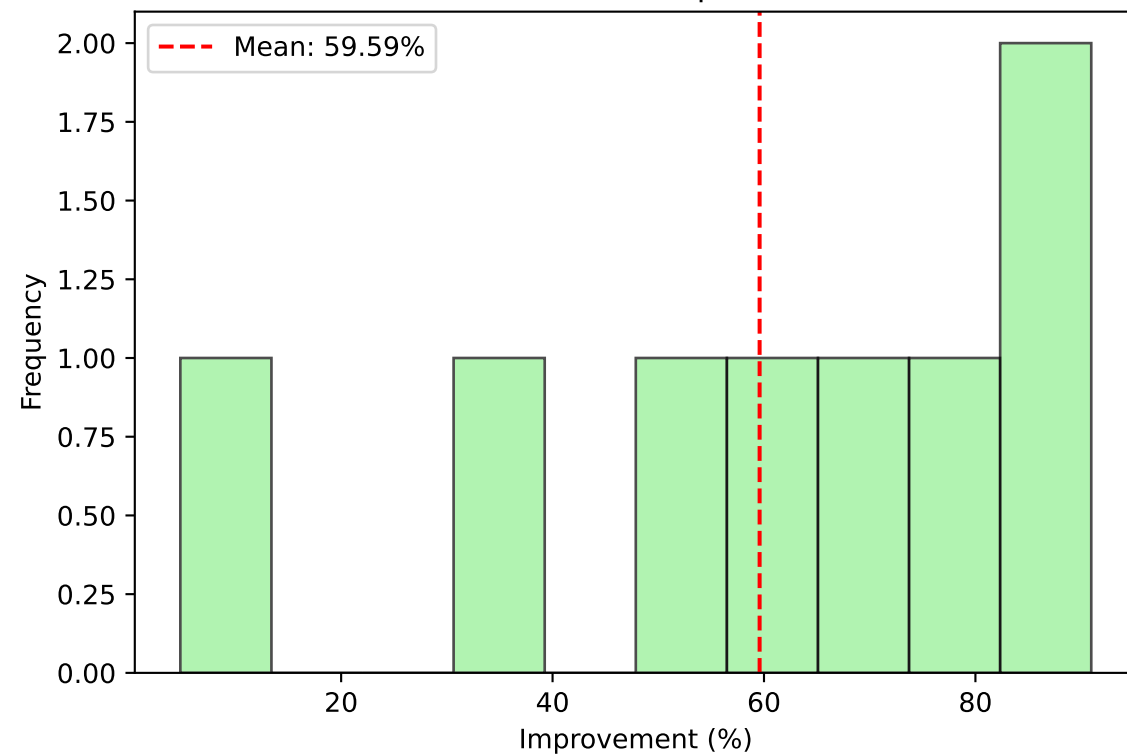
SQL Comparison Across All Experiments

Distribution of SQL Improvements (%)

Mean: 59.29%

Detailed Statistics

```
Covariate Study Detailed Results
Covariate Types: random_walk
Number of Experiments: 8

MASE Results:
- Without Covariate: 3.7767 ± 1.6512
- With Covariate: 1.8530 ± 2.1001
- Average Improvement: 59.59%
- Median Improvement: 66.10%

SQL Results:
- Without Covariate: 1.6339 ± 0.6512
- With Covariate: 0.7877 ± 0.8277
- Average Improvement: 59.29%
- Median Improvement: 67.99%

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

Best Performing Experiment (MASE):
- Experiment 3: 90.96% improvement

Worst Performing Experiment (MASE):
- Experiment 4: 4.79% improvement
```