

P8160 Simulation Project - Hierarchical Logistic Model for Mulit-Center Clinical Trial

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Introduction and Background

Statistical Methods

1. Initialization and Function Definitions
2. Sampling from Simple Monte Carlo
3. Designing Control Variate (CV)
4. Importance Sampling (IS)

Results

5. Comparing Bias, Variance, and CPU Time for Simple MC, Control variates, and Importance Sampling
6. (Extra credit) Use cumulative convergence plots

Discussion and Practical Implications

Conclusion