

Treatment Prediction Simulation – Blinded Technical Report

Objective:

This simulation evaluates probabilistic treatment-response predictions using a blinded synthetic dataset. The predictive workflow was executed without embedding any treatment-specific parameters, maintaining full blinding across labeling and analysis phases.

Methods:

A randomized cohort of 100 synthetic patient profiles was generated. Predictor variables were sampled from continuous distributions with controlled variance. Treatment labels were blinded using a uniform allocation mechanism. A baseline probabilistic model was applied to compute treatment-response likelihoods independently of the blinded labels.

Results:

The distribution of predicted response probabilities reflects the stochastic behavior of the underlying sampling structure. No inferential comparison was conducted due to maintenance of full treatment blinding.

A visualization of the prediction distribution is included to illustrate the range and central tendency across the synthetic cohort.

Conclusion:

This blinded simulation serves as a neutral baseline model for early-stage evaluation of treatment-response predictors, enabling later transition into unblinded or semi-blinded comparative modeling frameworks.

