

# TreeMMM

Tree-Based Market Mix Modeling with SHAP Attribution

pip install treemmm | MIT License | Working Paper v0.1 | Synthetic benchmarks, single seed

Metric	TreeMMM	GLMM Baseline	Context
Attribution MAPE (non-linear avg)	18.3%	24.0%	24% lower error across 3 non-linear DGPs
Interaction discovery	5 / 6 found	0 / 6	Automatic, no analyst specification needed
mROI ranking (Spearman rho)	0.96	0.26 (pharma) 0.90-1.00 (other)	Ranks channels by marginal return
Time per brand	< 1 min	Minutes to weeks	Full pipeline incl. Attribution Discovery

Attribution Accuracy Across 4 Datasets

Automatic Interaction Discovery (regression finds 0 / 6 without manual specification)

