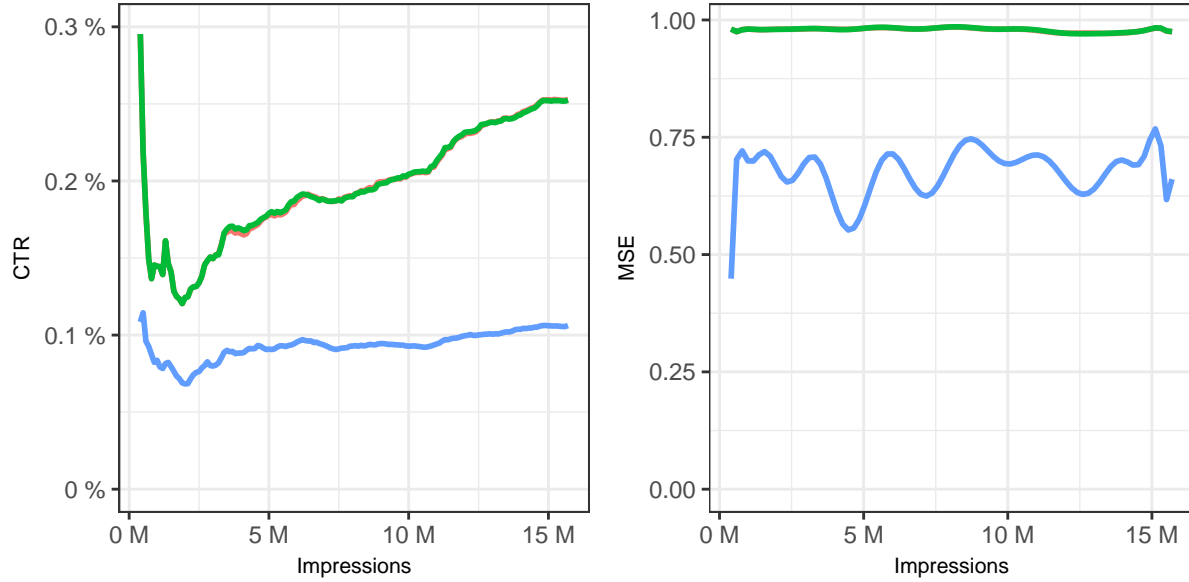


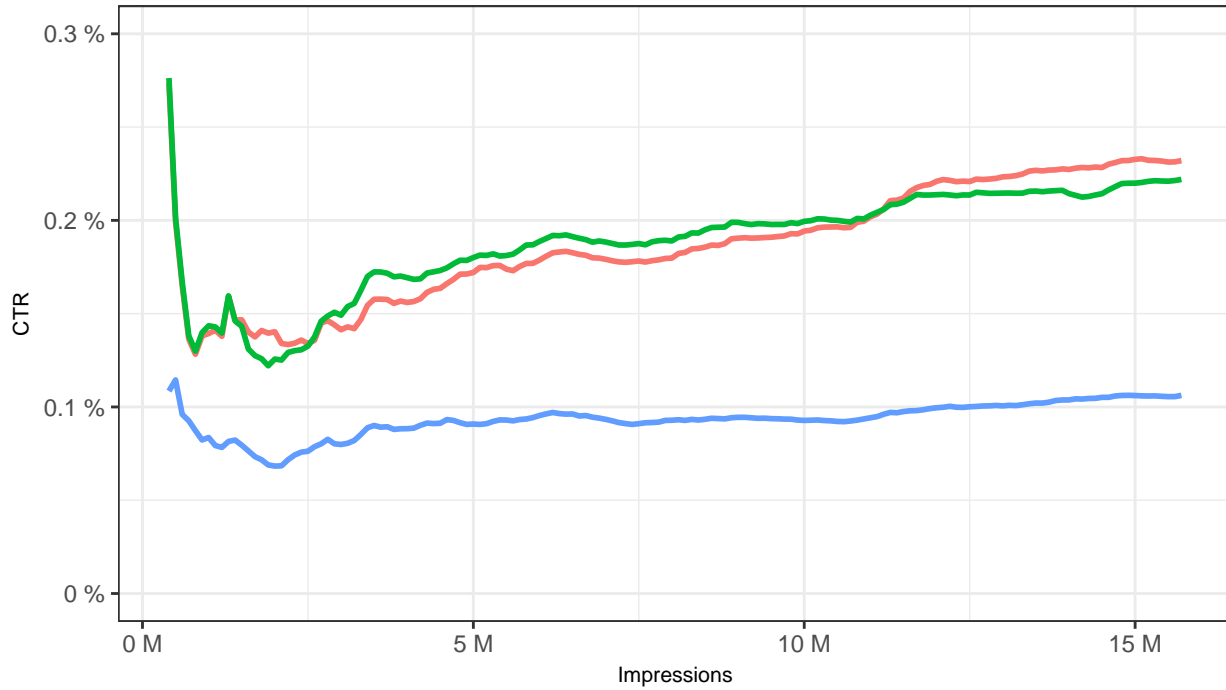
Target Budgets Multi-Campaign Analysis

Best Multi vs Target



Algorithm: — LinUCB Multi — LinUCB Multi-Target — Random

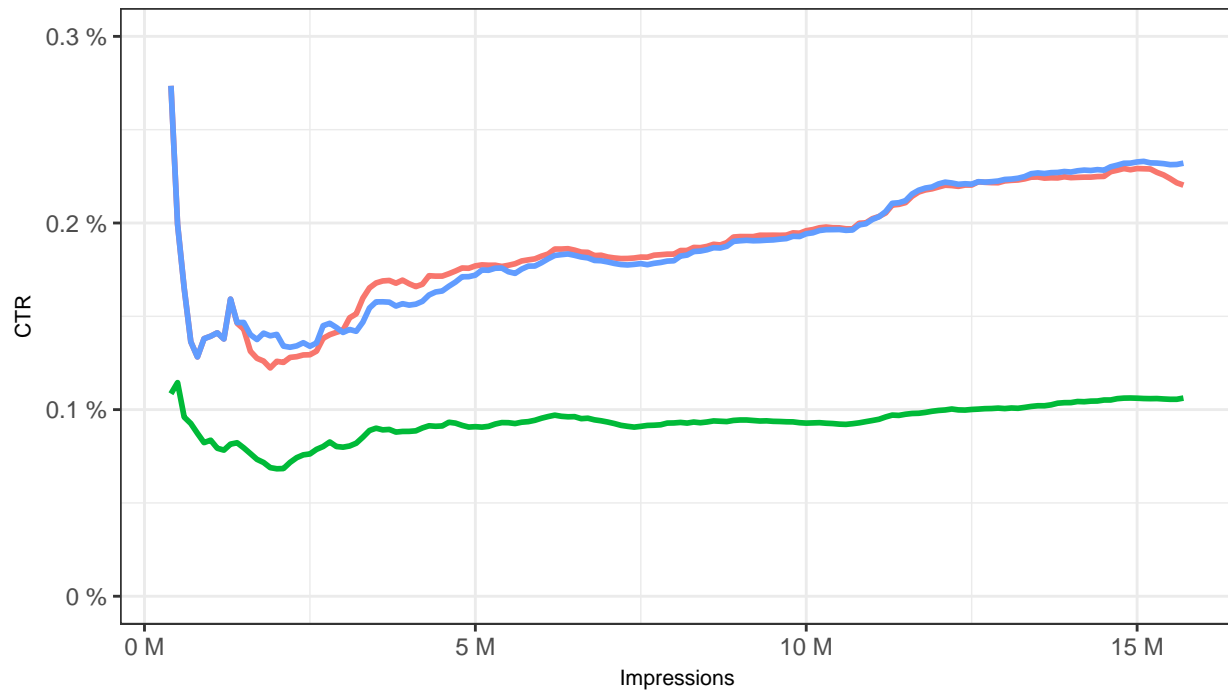
Target Split



Target Split: — DAILY — NO_SPLIT — Random

Target Split - Target is per day or per entire period

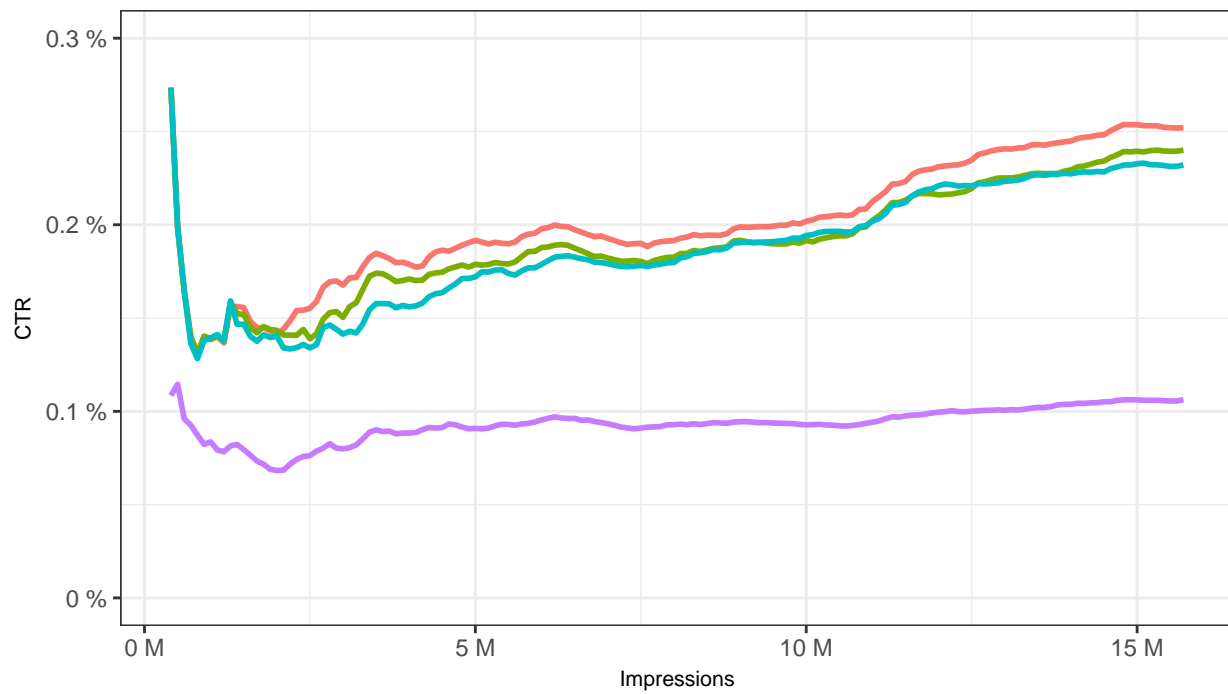
Early Update



Early Update: — False — Random — True

Early Update - Update when a budget is exhausted

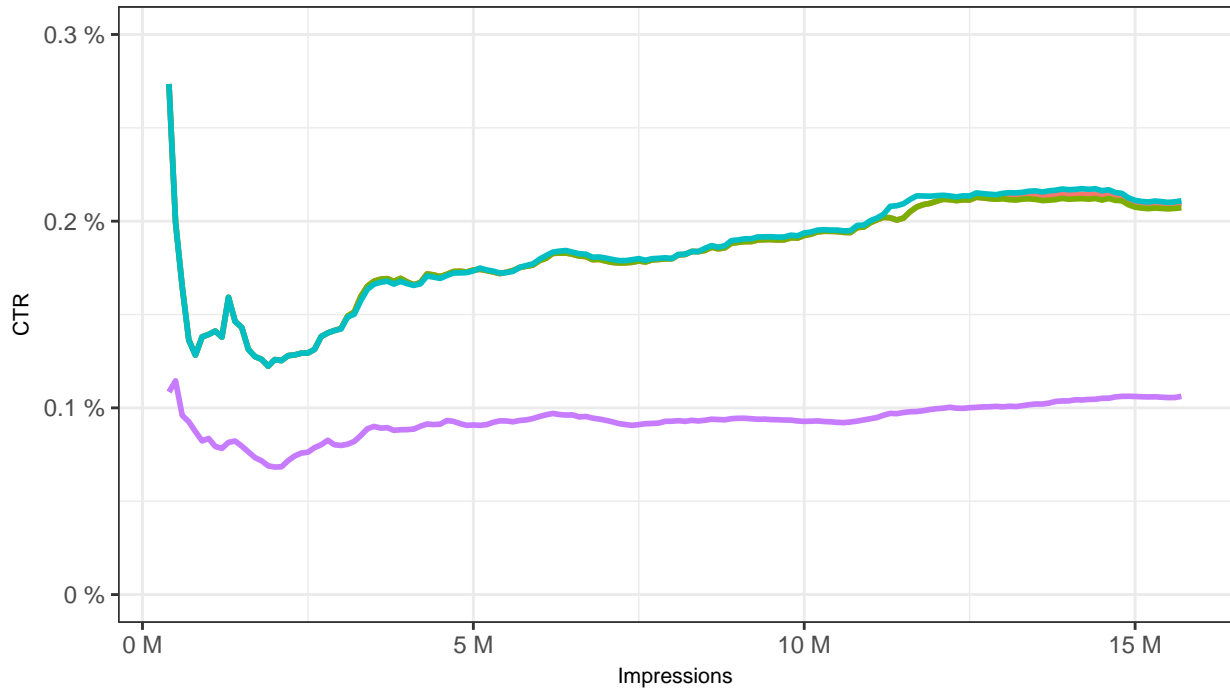
Target % Reduction



Target % Reduction: — 0.6 — 0.8 — 1 — Random

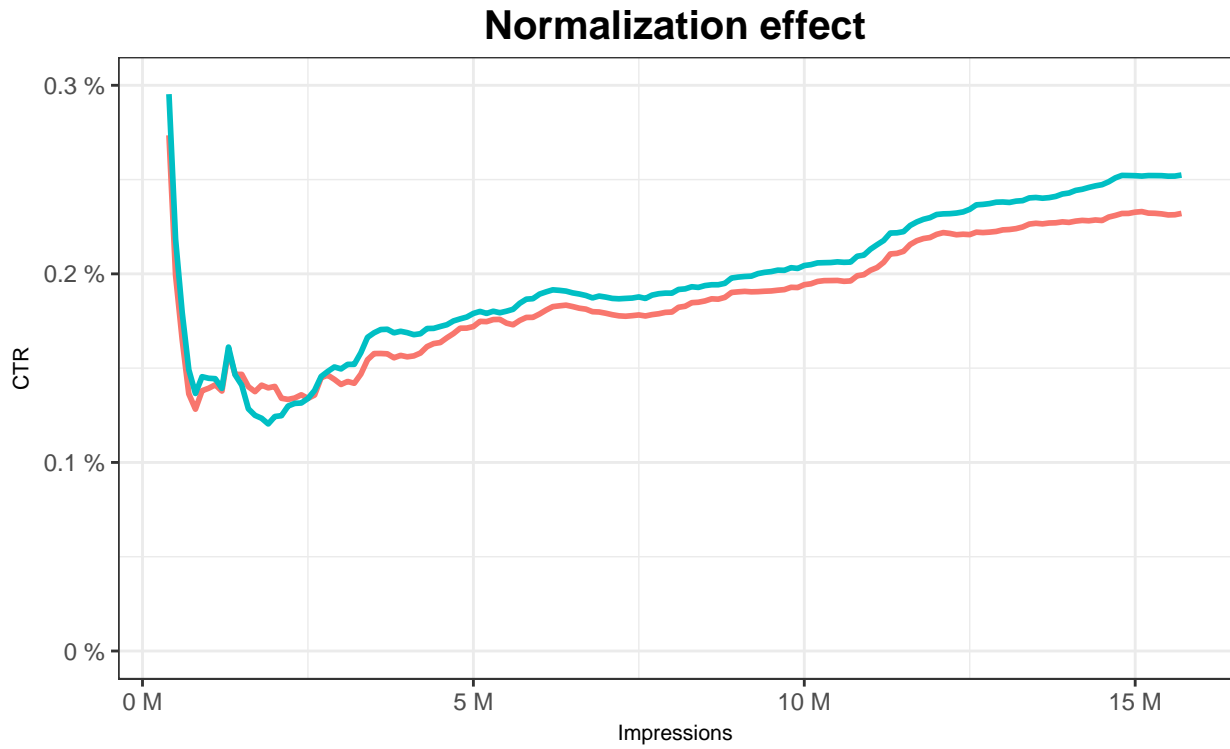
Target % Reduction - TargetBudget = TargetBudget * Reduction

Crop Percent



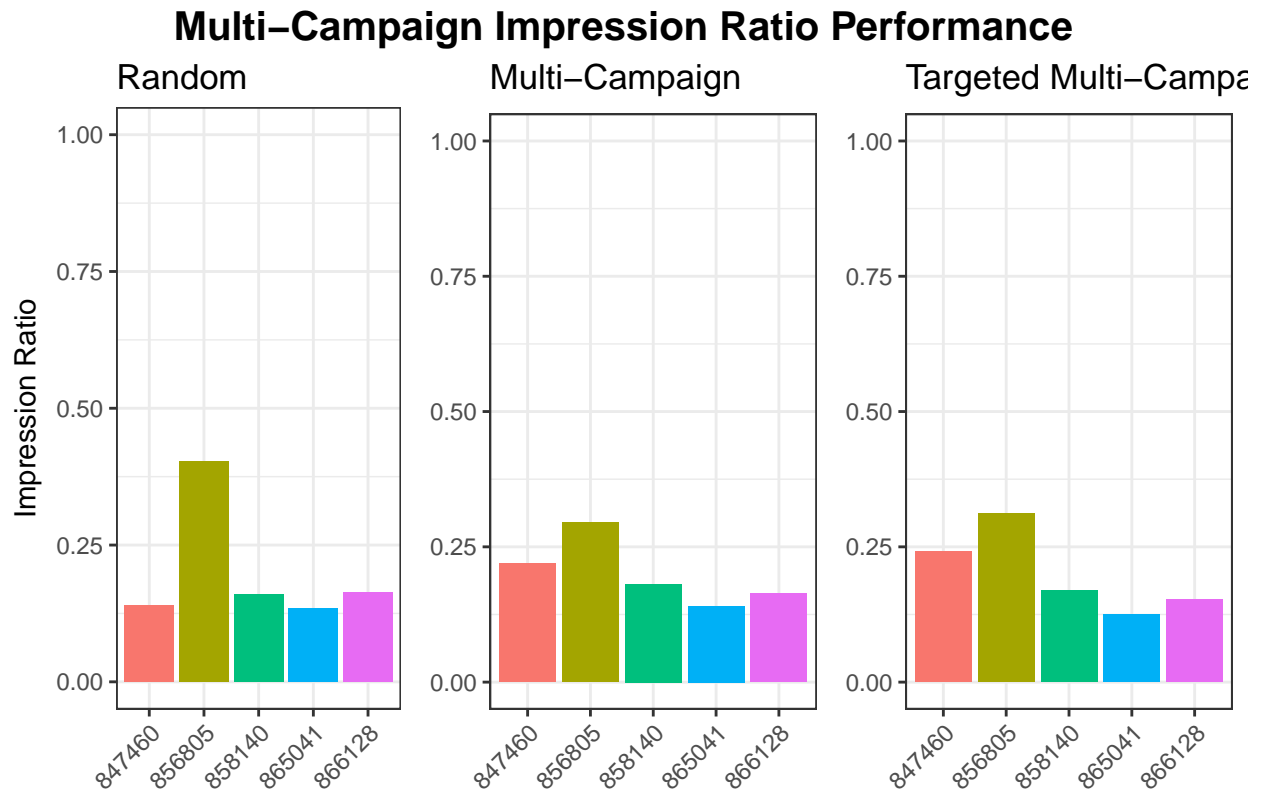
Crop %: 0.1 0.2 0.4 Random

Crop Percent - if TargetBudget < cp * E[#Impressions]) => TargetBudget = 0

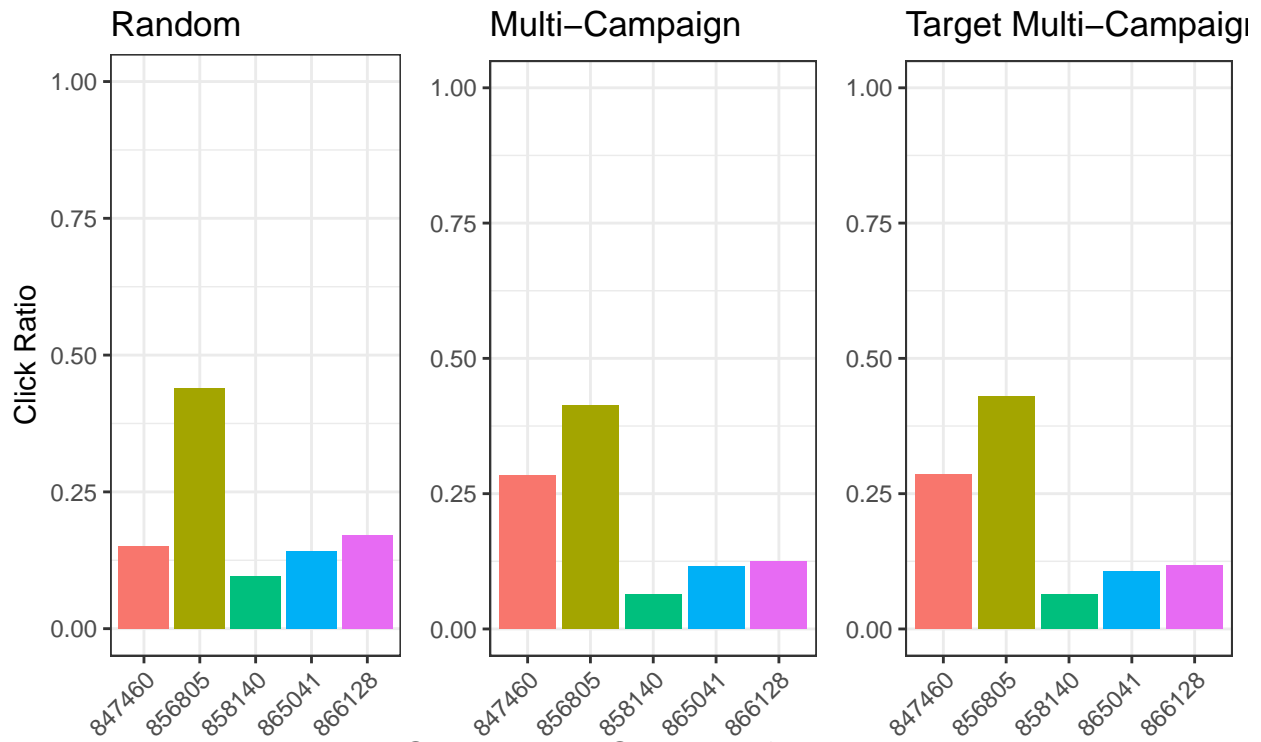


Normalized: — False — True

Normalization effect - $\text{TargetBudget} / E[\# \text{Impression}]$



Multi-Campaign Click Ratio Performance



Multi-Campaign CTR Performance

