Datasets: Grocery Shopping Baskets (BeiRen) and Point-of-Interest Check-ins (Foursquare).

Methodology: For a given testing tuple \( t = (u_i, B_i, v_j, \delta) \), hide \( v_j \) and generate the top-K predictions given \( v_j \) and \( B_i \).

Metric: Half-life Utility (HLU) measures the probability a user adopts a given item at a specific ranking position.

\[
\text{HLU} = \frac{1}{|T_{\text{test}}|} \times C \times \sum_{t \in T_{\text{test}}} \frac{2^{(1-\alpha)}}{(\delta - 1)}; \quad C = 100, \beta = 5
\]

Experiments

Comparison between the basket-sensitive models and the Association-Rules-based model

Conclusion: Experiments on the two datasets show that Basket-Sensitive Information (BFM) & Constraint (CBFM) contribute statistically significant improvements as compared to the baseline Association Rules (ASR) in term of top-K recommendations.