A APPENDIX

A.1 Additional plots

We include additional plots to supplement Figure 2 (Figure 5 below) and 4 (Figures 6 and 7), respectively.

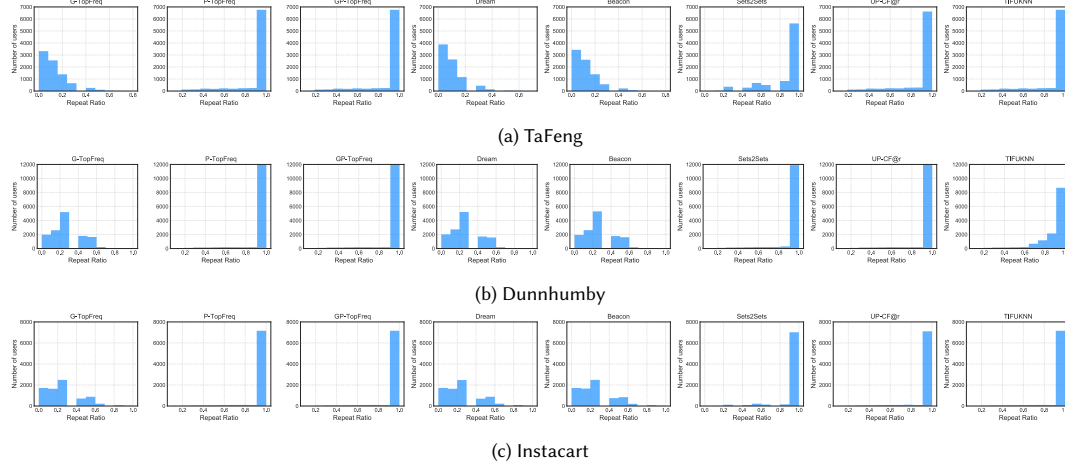(a) TaFeng

(b) Dunnhumby

(c) Instacart

Fig. 5. Distribution of the repeat ratio *RepR* of recommended baskets on TaFeng dataset for eight NBR methods (G-TopFreq, P-TopFreq, GP-TopFreq, Dream, Beacon, Sets2Sets, Up-CF@r, TIFUKNN).
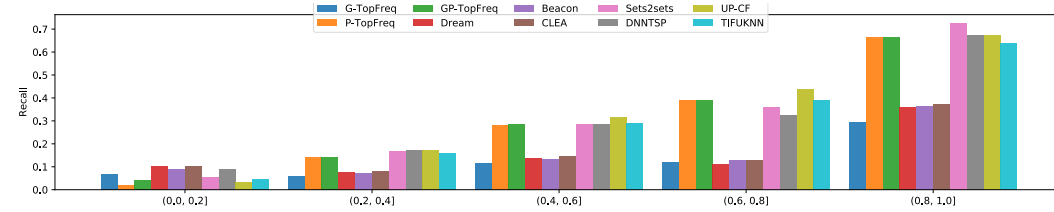

Fig. 6. Treatment effect on the TaFeng dataset, for ten NBR methods for users with different repeat ratios (binned in five groups).
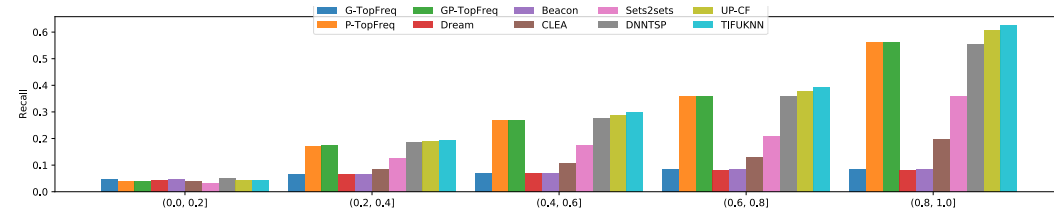

Fig. 7. Treatment effect on the Instacart dataset, for ten NBR methods for users with different repeat ratios (binned in five groups).

A.2 Reproducibility

To facilitate reproducibility of the results in this paper, our online repository contains the following resources: (1) source code and datasets; (2) descriptions of different dataset format; (3) pipelines about how to run and get results; and (4) this PDF file.