

TABLE 31: RQ6: training using sessions of the most recent 30 days before the testing set.

| DECEVE  |   |   | HR@   |  |   |   |   | MRR@  |  |   |
|---|---|---|---|--|---|---|---|---|--|---|
| RECSYS  | 1   | 3   | 5   | 10   | 20  | 1   | 3   | 5   | 10   | 20  |
| S-POP   | 0.03596   | 0.09942   | 0.12356   | 0.14465  | 0.15653   | 0.03596   | 0.06387   | 0.0694  | 0.07234  | 0.07318   |
| AR  | 0.11756   | 0.22679   | 0.28838   | 0.3558   | 0.35688   | 0.11756   | 0.16466   | 0.17865   | 0.1883   | 0.18836   |
| SR  | 0.04213   | 0.09349   | 0.12579   | 0.18443  | 0.24126   | 0.04213   | 0.06397   | 0.07129   | 0.07916  | 0.08314   |
| VSKNN   | 0.08734   | 0.17051   | 0.20827   | 0.26180  | 0.30811   | 0.08734   | 0.12380   | 0.13191   | 0.13913  | 0.14189   |
| SMF   | 0.06566   | 0.20381   | 0.29315   | 0.43566  | 0.56815   | 0.06566   | 0.12382   | 0.14412   | 0.1631   | 0.17237   |
| Item2Vec  | 0.0847  | 0.16657   | 0.21624   | 0.2965   | 0.38568   | 0.0847  | 0.12015   | 0.13141   | 0.14205  | 0.14817   |
| GRU4Rec+  | 0.08952   | 0.20018   | 0.28003   | 0.40954  | 0.54153   | 0.08952   | 0.13643   | 0.15457   | 0.17184  | 0.18107   |
| NARM  | 0.11983   | 0.27936   | 0.3797  | 0.5217   | 0.70695   | 0.11983   | 0.18611   | 0.20724   | 0.22832  | 0.23934   |
| STAMP   | 0.13336   | 0.27264   | 0.35459   | 0.48032  | 0.60696   | 0.13336   | 0.19339   | 0.21206   | 0.22891  | 0.23778   |
| NextItNet   | 0.18071   | 0.3442  | 0.42323   | 0.52906  | 0.6247  | 0.18071   | 0.2512  | 0.26929   | 0.28341  | 0.29012   |
| SRGNN   | 0.14191   | 0.28852   | 0.37334   | 0.49911  | 0.61951   | 0.14191   | 0.20517   | 0.22445   | 0.24118  | 0.24958   |
| CSRM  | 0.16867   | 0.32838   | 0.41316<br><b>HR</b> @  | 0.54922  | 0.67667   | 0.16867   | 0.23756   | 0.25684<br>MRR@   | 0.27494  | 0.28388   |
| CIKMCUP   | 1   | 3   | 5   | 10   | 20  | 1   | 3   | 5   | 10   | 20  |
| S-POP   | 0.03958   | 0.10163   | 0.11996   | 0.13162  | 0.1366  | 0.03958   | 0.06676   | 0.071   | 0.07267  | 0.07302   |
| AR  | 0.03938   | 0.10103   | 0.11990   | 0.13102  | 0.1300  | 0.03938   | 0.07014   | 0.071   | 0.07207  | 0.07302   |
| SR  | 0.0475  | 0.10586   | 0.14264   | 0.20992  | 0.27246   | 0.0475  | 0.07232   | 0.08067   | 0.08965  | 0.09401   |
| VSKNN   | 0.05065   | 0.10380   | 0.14204   | 0.20332  | 0.27240   | 0.05065   | 0.07232   | 0.03007   | 0.08404  | 0.08698   |
| SMF   | 0.03443   | 0.09768   | 0.14701   | 0.23846  | 0.35299   | 0.03443   | 0.06123   | 0.07247   | 0.08471  | 0.09254   |
| Item2Vec  | 0.01971   | 0.04676   | 0.0628  | 0.09646  | 0.15473   | 0.01971   | 0.0313  | 0.03486   | 0.03931  | 0.04326   |
| GRU4Rec+  | 0.02723   | 0.06813   | 0.10225   | 0.16953  | 0.25702   | 0.02723   | 0.04433   | 0.05204   | 0.0609   | 0.06687   |
| NARM  | 0.03642   | 0.10692   | 0.16702   | 0.2591   | 0.45553   | 0.03642   | 0.06606   | 0.07969   | 0.0917   | 0.10304   |
| STAMP   | 0.03764   | 0.09957   | 0.14463   | 0.22538  | 0.3343  | 0.03764   | 0.06387   | 0.07407   | 0.08466  | 0.09215   |
| NextItNet   | 0.03079   | 0.06388   | 0.09053   | 0.13419  | 0.19853   | 0.03079   | 0.0445  | 0.05038   | 0.05621  | 0.06068   |
| SRGNN   | 0.05012   | 0.12031   | 0.17404   | 0.26707  | 0.37981   | 0.05012   | 0.07957   | 0.09169   | 0.10414  | 0.11194   |
| CSRM  | 0.03919   | 0.10503   | 0.15882   | 0.25788  | 0.37739   | 0.03919   | 0.06675   | 0.079   | 0.09197  | 0.10016   |
|   |   |   |   |  |   |   |   | 3.5D.D.O  |  |   |
| TMALL   |   |   | HR@   |  |   |   |   | MRR@  |  |   |
| TMALL   | 1   | 3   | 5   | 10   | 20  | 1   | 3   | 5   | 10   | 20  |
| S-POP   | 0.04434   | 0.10295   | 5<br>0.1304   | 0.1627   | 0.18396   | 0.04434   | 0.06969   | <b>5</b> 0.07596  | 0.08036  | 0.08189   |
| S-POP<br>AR   | 0.04434<br>0.01533  | 0.10295<br>0.03149  | 5<br>0.1304<br>0.04229  | 0.1627<br>0.05675  | 0.18396<br>0.05713  | 0.04434<br>0.01533  | 0.06969<br>0.02225  | 5<br>0.07596<br>0.02469   | 0.08036<br>0.02671   | 0.08189<br>0.02673  |
| S-POP<br>AR<br>SR   | 0.04434<br>0.01533<br>0.01514   | 0.10295<br>0.03149<br>0.03106   | 5<br>0.1304<br>0.04229<br>0.04078   | 0.1627<br>0.05675<br>0.05555   | 0.18396<br>0.05713<br>0.07272   | 0.04434<br>0.01533<br>0.01514   | 0.06969<br>0.02225<br>0.022   | 5<br>0.07596<br>0.02469<br>0.02421  | 0.08036<br>0.02671<br>0.02618  | 0.08189<br>0.02673<br>0.02737   |
| S-POP<br>AR<br>SR<br>VSKNN  | 0.04434<br>0.01533<br>0.01514<br>0.02512  | 0.10295<br>0.03149<br>0.03106<br>0.03891  | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485  | 0.1627<br>0.05675<br>0.05555<br>0.05749  | 0.18396<br>0.05713<br>0.07272<br>0.06797  | 0.04434<br>0.01533<br>0.01514<br>0.02512  | 0.06969<br>0.02225<br>0.022<br>0.03074  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210   | 0.08036<br>0.02671<br>0.02618<br>0.03438   | 0.08189<br>0.02673<br>0.02737<br>0.03499  |
| S-POP<br>AR<br>SR<br>VSKNN<br>SMF   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319   | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471   | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954   |
| S-POP<br>AR<br>SR<br>VSKNN<br>SMF<br>Item2Vec   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507  | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119   | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457   | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101  | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865   | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101  | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558   | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838   |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152  | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387   | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071  | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078   | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071  | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222   | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473   |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471  | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396   | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071  | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078   | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071  | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222   | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473   |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025  | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07967   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416   | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396<br>0.14104  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025  | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784   | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07736   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@   | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033   | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735<br>0.05447  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07736   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735<br>0.05447  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07736<br>3<br>0.11389<br>0.1077   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12938<br>0.13486  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07696   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102  | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12938<br>0.13486<br>0.12294   | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07696<br>0.07231  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR VSKNN                                    | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109  | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07766<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12938<br>0.13486<br>0.12294<br>0.21187  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051   | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109  | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07263<br>0.07696<br>0.07231<br>0.15188   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207   |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR VSKNN SMF                                | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417  | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103<br>0.10484  | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12938<br>0.12294<br>0.21187<br>0.15035  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051<br>0.20944  | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339<br>0.27448  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417  | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07263<br>0.07696<br>0.07231<br>0.15188<br>0.06926  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659<br>0.07966  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046<br>0.08744   | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207<br>0.0919   |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR VSKNN SMF Item2Vec                       | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292   | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103<br>0.10484<br>0.05169   | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12938<br>0.13486<br>0.12294<br>0.21187<br>0.15035<br>0.06584                                  | 0.1627<br>0.05675<br>0.05555<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051<br>0.20944<br>0.09583                                 | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339<br>0.27448<br>0.12753   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292   | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07263<br>0.07696<br>0.07231<br>0.15188<br>0.06926<br>0.03584   | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659<br>0.07966<br>0.039   | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046<br>0.08744<br>0.04299                                  | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207<br>0.0919<br>0.0452   |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR SR VSKNN SMF Item2Vec GRU4Rec+           | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282                                  | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07967<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103<br>0.10484<br>0.05169<br>0.08682                                 | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12938<br>0.13486<br>0.12294<br>0.21187<br>0.15035<br>0.06584<br>0.11632                       | 0.1627<br>0.05675<br>0.05575<br>0.05749<br>0.09471<br>0.0119<br>0.12219<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051<br>0.20944<br>0.09583<br>0.15747                      | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339<br>0.27448<br>0.12753<br>0.19981                                  | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282                                  | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07263<br>0.07263<br>0.07291<br>0.15188<br>0.06926<br>0.03584<br>0.06157                                  | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659<br>0.07966<br>0.039<br>0.06836                                  | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046<br>0.08744<br>0.04299<br>0.07382                       | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207<br>0.0919<br>0.0452<br>0.07676                                  |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM         | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051                       | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07967<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103<br>0.10484<br>0.05169<br>0.08682<br>0.1328                       | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.06847<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12294<br>0.21187<br>0.15035<br>0.06584<br>0.11632<br>0.17737                                  | 0.1627<br>0.05675<br>0.05575<br>0.05749<br>0.09471<br>0.0119<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051<br>0.20944<br>0.09583<br>0.15747<br>0.2357                       | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339<br>0.27448<br>0.12753<br>0.19981<br>0.32289                       | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051                       | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07263<br>0.07263<br>0.072931<br>0.15188<br>0.06926<br>0.03584<br>0.06157<br>0.09174                                 | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659<br>0.07966<br>0.039<br>0.06836<br>0.10207                       | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046<br>0.08744<br>0.04299<br>0.07382<br>0.10985            | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207<br>0.0919<br>0.0452<br>0.07676<br>0.11513                       |
| S-POP AR SR VSKNN SMIF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR VSKNN SMIF Item2Vec GRU4Rec+ NARM STAMP | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051<br>0.04865            | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07967<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103<br>0.10484<br>0.05169<br>0.08682<br>0.1328<br>0.10137            | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12294<br>0.21187<br>0.15035<br>0.06584<br>0.11632<br>0.17737<br>0.13372                                  | 0.1627<br>0.05675<br>0.05575<br>0.05749<br>0.09471<br>0.0119<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051<br>0.20944<br>0.09583<br>0.15747<br>0.2357<br>0.17925            | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339<br>0.27448<br>0.12753<br>0.19981<br>0.32289<br>0.22957            | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051<br>0.04865            | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07263<br>0.07263<br>0.07231<br>0.15188<br>0.06926<br>0.03584<br>0.06157<br>0.09174<br>0.07117 | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659<br>0.07966<br>0.039<br>0.06836<br>0.10207<br>0.07849            | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046<br>0.08744<br>0.04299<br>0.07382<br>0.10985<br>0.08458 | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207<br>0.0919<br>0.0452<br>0.07676<br>0.11513<br>0.08813            |
| S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR VSKNN SMF Item2Vec GRU4Rec+ NARM STAMP   | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051<br>0.04865<br>0.04297 | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07967<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103<br>0.10484<br>0.05169<br>0.08682<br>0.1328<br>0.10137<br>0.07031 | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12938<br>0.13486<br>0.12294<br>0.21187<br>0.15035<br>0.06584<br>0.11632<br>0.17737<br>0.13372<br>0.09115 | 0.1627<br>0.05675<br>0.05575<br>0.05749<br>0.09471<br>0.0119<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051<br>0.20944<br>0.09583<br>0.15747<br>0.2357<br>0.17925<br>0.11263 | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339<br>0.27448<br>0.12753<br>0.19981<br>0.32289<br>0.22957<br>0.13802 | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051<br>0.04865<br>0.04297 | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735<br>0.07263<br>0.07263<br>0.07696<br>0.07231<br>0.15188<br>0.06926<br>0.03584<br>0.06157<br>0.09174<br>0.07117                 | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659<br>0.07966<br>0.039<br>0.06836<br>0.10207<br>0.07849<br>0.05971 | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046<br>0.08744<br>0.04299<br>0.07382<br>0.10985<br>0.08458 | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207<br>0.0919<br>0.0452<br>0.07676<br>0.11513<br>0.08813<br>0.08454 |
| S-POP AR SR VSKNN SMIF Item2Vec GRU4Rec+ NARM STAMP NextItNet SRGNN CSRM ROCKET S-POP AR SR VSKNN SMIF Item2Vec GRU4Rec+ NARM STAMP | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051<br>0.04865            | 0.10295<br>0.03149<br>0.03106<br>0.03891<br>0.05033<br>0.00507<br>0.06645<br>0.09152<br>0.06109<br>0.05471<br>0.07967<br>0.07736<br>3<br>0.11389<br>0.1077<br>0.10102<br>0.19103<br>0.10484<br>0.05169<br>0.08682<br>0.1328<br>0.10137            | 5<br>0.1304<br>0.04229<br>0.04078<br>0.04485<br>0.06319<br>0.00734<br>0.08865<br>0.12595<br>0.08078<br>0.10416<br>0.10183<br>HR@<br>5<br>0.12294<br>0.21187<br>0.15035<br>0.06584<br>0.11632<br>0.17737<br>0.13372                                  | 0.1627<br>0.05675<br>0.05575<br>0.05749<br>0.09471<br>0.0119<br>0.16387<br>0.11104<br>0.09396<br>0.14104<br>0.14033<br>10<br>0.14248<br>0.16536<br>0.15058<br>0.24051<br>0.20944<br>0.09583<br>0.15747<br>0.2357<br>0.17925            | 0.18396<br>0.05713<br>0.07272<br>0.06797<br>0.12743<br>0.01849<br>0.15954<br>0.25301<br>0.14734<br>0.11839<br>0.18182<br>0.18497<br>20<br>0.15225<br>0.16559<br>0.1706<br>0.26339<br>0.27448<br>0.12753<br>0.19981<br>0.32289<br>0.22957            | 0.04434<br>0.01533<br>0.01514<br>0.02512<br>0.01704<br>0.0023<br>0.03101<br>0.038<br>0.03071<br>0.02848<br>0.04025<br>0.03715<br>1<br>0.03955<br>0.05313<br>0.05075<br>0.12109<br>0.0417<br>0.02292<br>0.04282<br>0.06051<br>0.04865            | 0.06969<br>0.02225<br>0.022<br>0.03074<br>0.0229<br>0.00347<br>0.0463<br>0.06145<br>0.04374<br>0.03992<br>0.05735<br>0.05447<br>3<br>0.07263<br>0.07263<br>0.07263<br>0.07231<br>0.15188<br>0.06926<br>0.03584<br>0.06157<br>0.09174<br>0.07117 | 5<br>0.07596<br>0.02469<br>0.02421<br>0.03210<br>0.03583<br>0.00398<br>0.05135<br>0.06961<br>0.0482<br>0.04313<br>0.06294<br>0.06006<br>MRR@<br>5<br>0.07623<br>0.08305<br>0.07736<br>0.15659<br>0.07966<br>0.039<br>0.06836<br>0.10207<br>0.07849            | 0.08036<br>0.02671<br>0.02618<br>0.03438<br>0.03603<br>0.00457<br>0.0558<br>0.07449<br>0.05222<br>0.04641<br>0.06784<br>0.06516<br>10<br>0.07795<br>0.08739<br>0.08111<br>0.16046<br>0.08744<br>0.04299<br>0.07382<br>0.10985<br>0.08458 | 0.08189<br>0.02673<br>0.02737<br>0.03499<br>0.03954<br>0.00502<br>0.05838<br>0.08008<br>0.05473<br>0.04809<br>0.07067<br>0.06824<br>20<br>0.07866<br>0.0874<br>0.08256<br>0.16207<br>0.0919<br>0.0452<br>0.07676<br>0.11513<br>0.08813            |

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