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| **User** | **Feature name** |
| (Voucher received time – Registration time) in Years | X1 |
| (Voucher received time – Registration time) in Months | X2 |
| (Voucher received time – Registration time) in Days | X3 |
| (Voucher received time – Registration time) in Timestamp | X4 |
| Is\_seller | X5 |
| Gender (0-4) | X6 |
| Email\_verified | X7 |
| # of Received Vouchers (all) [learn from train data] | X8 |
| # of Voucher used [learn from train data] | X9 |
| # of Voucher unused [learn from train data] | X10 |
| % of Voucher (use/all) [learn from train data] | X11 |
| % of Voucher used/unused [learn from train data] | X12 |
| # of Received Vouchers (all) (6 types) [learn from train data] | X13-x18 |
| # of Voucher used (6 types) [learn from train data] | X19-x24 |
| # of Voucher not use (6 types) [learn from train data] | X25-x30 |
| % of Voucher (use/all) (6 types) [learn from train data] | X31-x36 |
| % of Voucher (used/not use) (6 types) [learn from train data] | X37-x42 |
| # of shops | X43 |
| # of shops (use vouchers) | X44 |
| # of shops (not use vouchers) | X45 |
| % of shops (use/all) | X46 |
| % of shops (used/not use) | X47 |
| # of shops (use vouchers) (6 types) | X48-x53 |
| % of shops (use/all) (6 types) | X54-x59 |
| % of shops (use/not use) (6 types) | X60-x65 |
| # total\_price all | X66 |
| # total\_price (use vouchers) | X67 |
| # total\_price (not use vouchers) | X68 |
| % total\_price (use/all) | X69 |
| % total\_price (use/not use) | X70 |
| # total\_price (use vouchers) (6 types) | X71-x76 |
| % total\_price (use/all) (6 types) | X77-x82 |
| % total\_price (use/not use) (6 types) | X83-x88 |
| # transaction all | X89 |
| # transaction (use vouchers) | X90 |
| # transaction (not use vouchers) | X91 |
| # transaction use vouchers (6 types) | X92 |
| % transaction (use vouchers/all) | X93 |
| % transaction (use vouchers/not use) (6 types) | X94-x99 |
| % transaction (use vouchers/all) (6 types) | X100-x105 |
| % transaction (use vouchers/not use) (6 types) | X106-x111 |
| % total\_price / transaction | X112 |
| % total\_price /transaction (use vouchers/all) | X113 |
| % total\_price /transaction (use vouchers/not use) | X114 |
| % total\_price /transaction (use vouchers/use voucher) (6 types) | X115-x120 |
| % total\_price /transaction (use vouchers/not use x91) (6 types) | X121-x126 |
| % total\_price/transaction (use vouchers/all x89) (6 types) | X127-x132 |
| % transaction/shops | X133 |
| % transaction use voucher/shops | X134 |
| % transaction /shops (use vouchers/all x43) (6 types) | X135-x140 |
| % transaction /shops (use vouchers/shops) (6 types) | X141-x146 |
| % total\_price /shops | X147 |
| ~~% total\_price /shops (use voucher/all x43)~~ | ~~X148~~ |
| % total\_price /shops (use voucher/shops) (6 types) | X149-x154 |
| % total\_price /shops (use voucher/shops) (6 types) | X155-x160 |
| # max transaction in shops | X161 |
| # min transaction in shops | X162 |
| # median transaction in shops | X163 |
| # max transaction in shops (use voucher) | X164 |
| # min transaction in shops (use voucher) | X165 |
| # mean transaction in shops (use voucher) | X166 |
| # max total\_price in shops | X167 |
| # min total\_price in shops | X168 |
| # median total\_price in shops | X169 |
| # max total\_price in shops (use voucher) | X170 |
| # min total\_price in shops (use voucher) | X171 |
| # median total\_price in shops (use voucher) | X172 |
| Mean time span of shopping | X179 |
| Max time span of shopping | X180 |
| Min time span of shopping | X181 |
| Median time span of shopping | X182 |
| Mean time span of shopping (use voucher) | X183 |
| Max time span of shopping (use voucher) | X184 |
| Min time span of shopping (use voucher) | X185 |
| Median time span of shopping (use voucher) | X186 |
| Mean time span of (order time-received time) | X187 |
| Max time span of (order time-received time) | X188 |
| Min time span of (order time-received time) | X189 |
| Median time span of (order time-received time) | X190 |
| Recent shop time – received time | X191 |
| Recent use voucher time – received time | X192 |
| # voucher received at 0 day | X193 |
| # voucher received before 7 days (exclude 0 day) | X194 |
| # voucher received before 4 days (exclude 0 day) | X195 |
| # voucher received before 2 days (exclude 0 day) | X196 |
| # voucher received before 30 days (exclude 0 day) | X197 |
| # voucher received at 0 day (6 types) | X198-x203 |
| # voucher received before 7 days (exclude 0 day) (6 types) | X204-x209 |
| # voucher received before 4 days (exclude 0 day) (6 types) | X210-x215 |
| # voucher received before 2 days (exclude 0 day) (6 types) | X216-x221 |
| # voucher received before 30 days (exclude 0 day) (6 types) | X222-x227 |
| # all events at 0 day | X228 |
| # events before 7 days (exclude 0 day) | X229 |
| # events before 4 days (exclude 0 day) | X230 |
| # events before 2 days (exclude 0 day) | X231 |
| # events before 30 days (exclude 0 day) | X232 |
| # all events at 0 day (6 types) | X233-x238 |
| # events before 7 days (exclude 0 day) (6 types) | X239-x244 |
| # events before 4 days (exclude 0 day) (6 types) | X245-x250 |
| # events before 2 days (exclude 0 day) (6 types) | X251-x256 |
| # events before 30 days (exclude 0 day) (6 types) | X257-x262 |
| # active sessions (0-30d) | X263-x293 |
| # active sessions before 7 days (exclude 0 day) (6 types) | X294 |
| # active sessions before 4 days (exclude 0 day) (6 types) | X295 |
| # active sessions before 2 days (exclude 0 day) (6 types) | X296 |

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| Date | Feature name |
| Weekday | X297 |
| Hour | X298 |
| Month | X299 |
| Day | X300 |
| 1/3-3/3 month | X301 |
| ¼-4/4 quarter | X302 |
| Isweekend | X303 |
| Is holiday | X304 |
| # total vouchers | X305 |
| # used vouchers | X306 |
| # unused vouchers | X307 |
| # total price all | X308 |
| # total price (use voucher) | X309 |
| # total price (not use voucher) | X310 |
| # transactions | X311 |
| # transition (use voucher) | X312 |
| # transition (not use voucher) | X313 |
| % transition (use/all) | X314 |
| % transition (use/not use) | X315 |
| % voucher (use/all) | X316 |
| % voucher (use/not use) | X317 |
| # total vouchers | X318-x323 |
| # used vouchers | X324-x329 |
| # unused vouchers | X330-x335 |
| # total price all | X336-x341 |
| # total price (use voucher) | X342-x347 |
| ~~# total price (not use voucher)~~ | ~~X348-x353~~ |
| # transactions | X354-x359 |
| # transition (use voucher) | X360-x365 |
| ~~# transition (not use voucher)~~ | ~~X366-x371~~ |
| % transition (use/all) | X372-x377 |
| ~~% transition (use/not use)~~ | ~~X378-x383~~ |
| % voucher (use/all) | X384-x389 |
| % voucher (use/not use) | X390-x395 |

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| Voucher | Feature name |
| discount | X396 |
| Max\_value | X397 |
| Type | X398 |
| # vouchers [learn from train data] | X399 |
| # used [learn from train data] | X400 |
| # unused [learn from train data] | X401 |
| % used/all | X402 |
| % used/not use | X403 |