The Idiot’s Guide to the SCENE Data

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# Background

The so-called *SCENE dataset*, obtained in 2018 and now a legend in the MMA and MMAI programs, contains gigabytes of data on member demographics and transaction histories between December 2016 and December 2017.

The SCENE dataset is large and complicated, but I have tried to make it easy to get going.

## Data Size and Samples

SCENE has member base of approximately 9 million enrolled members, and the original dataset contained almost a terabyte of data. Since analysing such a large volume of data brings a lot of challenges, I have since created a small subset of the data by randomly sampling 19K customers, and keeping all of their transactions and removing the rest. This subset is called *sample01* and is what we’ll use in this course.

## Card Type

All SCENE members have a Black SCENE card**,** which is used at Partners (e.g., Cineplex, CARA restaurants) to earn and redeem (i.e., burn) points. They may also have other Scotia SCENE cards with which they can earn points through their everyday spending. Red card = Scotia Debit Card, White card = Scotia Visa Card, Silver card = Scotia Pre Paid card.

## Enrolment

SCENE members can be enrolled via a number of different channels. They are considered *AutoEnrolled* if they are enrolled automatically via Scotiabank and *SelfEnrolled* if they enrol via any other channel, such as Kiosk, Mobile App and Customer Web.

## Black card activity/engagement

We judge how *engaged* our users are by their Black Card activity – how often (and how much) do they earn/redeem at our partners? Points earned through Scotia SCENE card transactions are not counted towards a member’s Black Card activity. Black card activity can be identified using pointtypeid (see table below for which ones). Scotia SCENE card transactions are included in the Points table but can be excluded from Black Card activity metrics by using the pointtypeids listed. Where a problem specifically states to look at Scotia SCENE card activity you can either use pointtypeid OR use the ex\_transactiondescription.

# Tables

The original SCENE dataset contains 19 tables in total. Please see the ER Diagram for a description of each and how they are related (and a big thank you to team Colborne from MMA 2019W for creating it.) There are, however, really only three main concepts in the dataset:

* The **Customer**. Data about location, language, gender, age, join date, do they have SMS, etc.
* **Points** transactions. Transactions include a timestamp, a merchant name (e.g., Cineplex or McDonald’s), number of points earned (if positive) or burned (if negative), dollar amount, whether the customer used their Black Card.
* **Summaries**of customer usage and balanaces, derived from the above two tables. (Unfortunatley, the SQL code use to derived these summary tables has not been provided.)
  + **PointTypeStatistcs** outlines the total amount of points earned, used, etc. for each member.
  + **QualityActivity**indicates, for each month, whether a user had any activity, was marketable, was reachable, and overall, had quality activity.
  + **AccountBalance** indicates the current point balance and other statistics for the customer.
  + **AccountHistory** shows major events for the customer, such as when they were enrolled, when the account linked to another account, when a user logged in to the web app or mobile app, address changed, point adjustments, complaint issued, etc.

## Cleaned Tables

I have cleaned and joined the data (my code is in the Python notebook named scene\_clean.ipynb) to produce two beautiful tables for you:

* SceneAnalytics.dbo.SP\_Points\_cleaned
* SceneAnalytics.dbo.SP\_CustomerDetail\_cleaned

Those should be all you need for most projects; you may also use some of the summary tables, but you may also need to create your own summary tables.

You may use the raw, unclean data in the original 19 tables if you wish, but be warned.

## Points table

The most important table to understand is the Points table. It is around this that most of your analysis will focus. Please make sure that you understand its structure and what it contains. If anything is unclear then PLEASE ASK QUESTIONS!

## CARA transactions

CARA transactions are contained in both the SP\_Points table and the ProxyPointTransaction table. Do not use both of them as the same time as entries in the ProxyPointTransaction table contain the same CARA transactions as the Points table but just in more detail. If you are doing CARA specific work then use the ProxyPoints table only.

## Table linking

Several tables require you to use lookup tables. The most important ones are the Points table and the Account History table. PLEASE TRY AND UNDERSTAND THESE TABLES WELL.

The points table should be linked to the PointTypeID lookup table to understand what type of transaction each point is e.g. CARA redemption, Cineplex earn etc.

It can also be linked to Location, LocationCara and Partner look up tables if you want to know where a point was earned/redeemed.

The AccountHistory table should be linked to the AccountHistoryTypeID lookup table to understand what each action was e.g. account open, app logon. It can also be linked to the Source lookup table to understand where a member enrolled.

*App logon*

If a user’s AccountHistory includes an entry for AccountHistoryTypeID = 607, then that user has logged into the app at least once.

Tables

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| **SP\_Points** | **Table showing a member’s points transaction history for last 3 years. Unique at a point level. THIS IS THE MOST IMPORTANT TABLE.** |
| Unique\_member\_identifier |  |
| PointId | Unique point id |
| Pointdt | Date the point(s) were earned/burned/reversed |
| Points | Total points earned/burned/reversed in the transaction |
| Pointtypeid | This shows the type of point eg. Cinplex earn, CARA redeem, Carrot earn. This should be used alongside the PointTypeId lookup table.  The following point types constitute Black Card activity: (11,12,1252,1253,1254,1282,1283,1290,1322,1323) |
| ex\_sourceid | This shows where the point was earned / redeemed. Be careful as this has different meanings according to the pointtypeid!  For Cineplex point types this should be used with the SP\_Location lookup table. This then shows the CPX location.  For the CARA points types it should be used with the SP\_LocationCARA table. This then shows the CARA location.  For SCENE/Cineplex/Scotia campaign point types, it refers to the campaign that the member is responding to. The lookup table has not been provided.  For general point types, it should be used with the SP\_Partner\_E lookup table. This then shows the Partner e.g. Carrot. |
| TransAmount | Amount associated with the points transaction. |
| ex\_transactiondescription | Further information about the Scotiabank card transaction – usually gives information about the merchant at which the transaction occurred.  Where MERGE is included, this is where a member had more than one account and their points were then merged and an account closed.  T = To F = From W = do not merge to TO account.  All MERGE transactions should be excluded from your analysis as these are duplicate entries. |
| MerchantID | MerchantID for where the transaction occurred. A MerchantID lookup table has not been provided. |

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| **SP\_CineplexStore** | **Table showing orders received from the Cineplex Store** |
| Unique\_member\_identifier |  |
| OrderID | Unique order id |
| Points | Total points earned/burned/reversed in the transaction |
| OrderDt | Date that the order was placed |

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| **SP\_PointsType** | **Look up table showing different points types. Should be used in conjunction with SP\_Points table. Can be used to determine if a point was an earn/redeem/reversal transaction. Unique at a point type level** |
| PointTypeID | Unique pointtype identifier. Should be connected to the points table. |
| Code |  |
| Name |  |
| Desc | Description of the point type. Can be used to classify point types into earn/burn/reversal point types |

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| **SP\_Location** | **Look up table for Cineplex Locations. Can be used to see where a Cineplex points transaction occurred. Unique at an active location level** |
| LocationCode | Unique location identifier. Should be connected to the points table using ex\_sourceID |
| LocationName | Name of the Cineplex location |
| Province |  |
| City |  |
| isActive | Should be used to determine the most up to date locations |

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| **SP\_Partner\_E** | **Look up table for Partners. Can be used to see where Partner points transactions occurred. Unique at an active Partner level** |
| Ex\_sourceID | Point source identifier |
| PartnerID | Unique Partner identifier |
| PartnerName | Name of Partner |
| isDeleted | Should be used to determine the most up to date Partners |

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| **SP\_ProxyPointTransaction** | **Table containing more detailed information about Partner point transactions. Includes information about base and bonus points. Unique at a point level.** |
| Unique\_member\_identifier |  |
| TransactionDate | Date the transaction took place |
| Brand | CARA brand that the transaction took place at |
| Transactiontype | Either Issue, Redeem or Reversal |
| TransactionID | Unique identifier for each transaction |
| TransactionSubTotalAmount | Transaction amount pre tax |
| Base points | Base points earned, burned or reversed |
| Bonus points | Members can use bonus offers at CARA restaurants e.g. 15x points at Swiss Chalet. This shows bonus points earned. |
| LocationCode | Partner location that the transaction took place. Should be used with the SP\_LocationCARA lookup table |

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| **SP\_LocationCARA** | **Look up table for CARA locations. Can be used to see where CARA points transactions occurred. Use in conjunction with Points table. Unique at an active CARA location level** |
| LocationCode | Unique location identifier |
| Ex\_sourceID | Point source identifier |
| LocationName | Name of location |
| Province |  |
| isActive | Should be used to determine the most up to date CARA locations |

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| **SP\_DimProxyLocation** | **Look up table for CARA locations. Contains postal codes, which is useful for distance calculations (how far a member is from a partner location). Unique at an active CARA location level** |
| LocationID | Unique location identifier |
| LocationCode |  |
| BrandCode |  |
| isCorporate | Flag to show if the location is Corporate. 1 = yes, 0 = no. |
| Name |  |
| Address |  |
| City |  |
| Province |  |
| PostalCode |  |
| Operating Status | Should be used to determine the most up to date locations |

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| **SP\_PointTypeStatistics** | **Table showing a summary of members earn/burn transactions. Unique at a member level. Shows information from the start of a member’s tenure. A real time snapshot.** |
| Unique\_member\_identifier |  |
| BlackEarnCount | Shows summary of member’s Black Card earn transactions program to date |
| BlackEarnLastDt | Date of the member’s last Black Card earn transaction |
| BlackEarnPointTotal | Total Black Card points earned by member |
| BlackBurnCount | Shows summary of member’s black card burn transactions program to date |
| BlackBurnLastDt | Date of the member’s last Black Card burn transaction |
| BlackBurnPointTotal | Total Black Card points burned by member |
| LoadTime |  |
| OrderCount | Member’s total transactions at the Cineplex Store |
| OrderPointTotal | Total points earned at Cineplex store |
| OrderLastDt | Last time the member ordered at the Cineplex store |
| ConcessionLastDt | Last time a member was active at Concession – previously this was when a member received a discount by showing their card at Concession, now it relates to when a member earns points at concessions. |
| MusicStoreLastDt |  |
| BlackActivityDays | Total days a member has been black card active – either earn or redemption transactions – since the start of the program |
| CnplxOnlineBonusLastDt | Last date a member received the 20 point bonus for ordering tickets online |
| CnplxEarnTuesdayLastDt | Last date a member received discounted tickets because it was a Tuesday |
| LastDt | Last date a member was black card active – earn or burn activity |
| ChildTicketsLastDt | Last date a member earned points on a child ticket |

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| **SP\_AccountBalance** | **Table showing a current summary of a member’s points. Unique at a member level** |
| Unique\_member\_identifier |  |
| Points | Current points balance for the member. Do not use this figure for a members balance, use TotalPoints as this Points figure does not take into account adjustments. |
| Adjustments | Current adjustments to the members points balance |
| POSCineplex |  |
| POS |  |
| AccountOpenD2D |  |
| PacPadD2D |  |
| VisaCineplex |  |
| VISA |  |
| VISAAccountOpen |  |
| CineplexIssue |  |
| CineplexRedeem |  |
| AdjustmentsBNS | Adjustments made by BNS call centre |
| AdjustmentsMaritz | Adjustments made by Maritz call centre |
| AdjustmentsCineplex | Adjustments made by Cineplex call centre |
| PointsSCENE |  |
| PointsCatalogOrders |  |
| CARAIssue |  |
| CARARedeem |  |
| AdjustmentsCARA |  |
| BNSOther |  |
| AdjustmentsOther |  |
| VISAPrePaid |  |
| PointsTotal | This is the figure which should be used when considering a member’s current points balance. This is Points+Adjustments |

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| **SP\_AccountHistory** | **Table showing the history of a member’s account. Can be used to see if a member has had returned mail or if they have logged into the SCENE App. Unique at an event level** |
| Unique\_member\_identifier |  |
| AccountHistoryID | Unique identifier for each action |
| HistoryDt | Date that the event/action took place |
| SourceID | Shows which source recorded/performed the event/action |
| AccountHistoryTypeID | Can be used to determine what member action is being recorded. This should be used in conjunction with the Account History Type lookup table.  This includes things like accountopens and app log ins. |

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| **SP\_AccountHistoryType** | **Table showing type of events/actions that are recorded on a member’s account. Can include things like returned mail or SCENE App logins** |
| AccountHistoryTypeID | Can be used to determine what member action is being recorded. This should be used in conjunction with the Account History Type lookup table. |
| Name |  |
| Descr | Description of event/action type |
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| AccountHistoryTypeID | Can be used to determine what member action is being recorded. This should be used in conjunction with the Account History Type lookup table |

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| **SP\_CustomerDetail** | **Table showing basic information of a member. Unique at a member level. Good for understanding things like their Gender and Age** |
| Unique\_member\_identifier |  |
| City |  |
| StateProv |  |
| FSA |  |
| PointsTotal | Current points total or member. Should match information in Account Balance table. |
| LanguagePreference |  |
| Gender |  |
| Age |  |

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| **SP\_CustomerExtension** | **Table showing detailed information/preferences of a member. Unique at a member level** |
| Unique\_member\_identifier |  |
| PrintCardFl | Shows if a member has opted not to receive a plastic card. 1 = has a plastic card, 0 = does not have a plastic card |
| CreateDt |  |
| ReferredBy |  |
| ActivityStatusScotiaScene | Can be used to determine if a member is dormant (black card inactive for 2 years plus) |

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| **SP\_FactEnrollment** | **Table showing the open and close information of a member’s account. Unique at a member level. Good for understanding if a member has a Scotia product.** |
| Unique\_member\_identifier |  |
| AccountOpenKey | Date that the member account was opened. In Varchar not date format |
| AccountCloseKey | Date that the member account was closed. Default value of XX for accounts that are not closed. Varchar not date format |
| IsAutoEnrolled | Flag to show if an account was AutoEnrollled (.i.e was opened at ScotiaBank). 1 for AutoEnrolled, 0 for SelfEnrolled |
| Age | Current age of the member |
| Loadtime |  |
| EnrollmentSourceKey | Where the member opened the account. Should be connected to ex\_sourceID in SP\_Source lookup table |
| isBNS | Has a ScotiaBank debit card |
| isVCL | Has a ScotiaBank credit card |
| isPrePaid | Has a ScotiaBank prepaid card |

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| **SP\_Source** | **Lookup table providing description of Enrollment sources. Unique at an Enrollment Source level** |
| SourceID | Unique enrolment source identifier |
| Code |  |
| Descr | Description of the enrolment source |
| Name |  |

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| **SP\_FactAttribute** | **Table classifying member’s activity in specific areas. Unique at a member level. Good for understanding more about the behaviour of a member. Useful for segmentation purposes and understanding drivers of behaviour.** |
| Unique\_member\_identifier |  |
| isActive | Does not contain information on if a member is Black Card active (see SP\_QualityActivity table for this information). DO NOT USE. |
| OnlineTicketPurchaser\_tendancy | The flag will identify if the member has a tendency to purchase their tickets online. • Has a tendency to purchase tickets online = 1 • No Tendency = 0  Out of all theatre visits, program-to-date, the percentage of visits where tickets were purchased online is 50-74% and the number of visits is greater-than or equal to 4. OR Out of all theatre visits program-to-date, the percentage of visits where tickets were purchased online is 75-100% |
| OnlineTicketPurchaser\_value | The key metric recorded in the value field will be the percentage of tickets purchased online.  • Percentage of online purchases = Total visits via online purchases / Total visits |
| TuesdayAttendee\_tendancy | The flag will identify if the member has a tendency visit the theatre on a Tuesday. • Has a tendency to visit on Tuesday = 1 • No Tendency = 0  The rule that defines if the member has a tendency is defined below.  Out of all theatre visits, program-to-date, the percentage of visits on a Tuesday is 50-74% and the number of visits is greater-than or equal to 4. OR Out of all theatre visits program-to-date, the percentage of visits on a Tuesday is 75-100%. |
| TuesdayAttendee\_value | The key metric recorded in the value field will be the percentage of Tuesday visits out of total visit  • Percentage of Tuesday Visits = Total Tuesday Visits for member/ Total visits for member |
| ConcessionPurchaser\_tendancy | The flag will identify if the member has a tendency to make concession purchases with their theatre visit. • Has a tendency to make concession purchases = 1 • No Tendency = 0  Out of all theatre visits program-to-date, the percentage of visits with a concession purchase is 50-74% and the number of visits is greater-than or equal to 7. OR Out of all theatre visits program-to-date, the percentage of visits with a concession purchase is 75-100% |
| ConcessionPurchaser\_value | The key metric recorded in the value field will be the percentage of visits with a concession purchase.  • Percentage of visit with concession purchases = Total visits with Concession Purchases / Total visits |
| OpensEmail\_tendancy | The SCENE member must have opened at least one email in the past 12 months. |
| OpensEmail\_value | The key metric recorded in the value field will be the propensity to open emails based on the following ranges. This will be recorded as LOW, MED or HIGH, not a percentage.  • Percentage of opened emails in past 12 months = Total opened emails in past 12 months / Total emails sent in past 12 months  LOW: • Opened 1-14% of emails sent OR • Opened 15-29% of emails sent if emails sent is equal to or less than 19  MED: • Opened 15-29% of emails sent if emails sent is equal to or greater than 20 OR • Opened 30-49% of emails sent if emails sent is equal to or less than 49  HIGH: • Opened 30-49% of emails sent if emails sent is equal to or greater than 50 OR • Opened 50-100% of emails |
| AttendsWithChild\_tendancy | The flag will identify if the member has a tendency visit the theatre with a child.  • Has a tendency to visit with a child= 1 • No Tendency = 0  Out of all theatre visits program-to-date, the percentage of visits with children is 25-49% and total visits are equal to or greater than 10. OR Out of all theatre visits program-to-date, the percentage of visits with children is 50-74% and total visits are equal to or greater than 4. OR Out of all theatre visits program-to-date, the percentage of visits with children is 75-100%. |
| AttendsWithChild\_value | The key metric recorded in the value field will be the percentage of visits with children. |
| SeasonalWatcherSummer\_tendancy |  |
| SeasonalWatcherHoliday\_tendancy |  |
| SeasonalWatcherFall\_tendancy |  |
| SeasonalWatcherSpring\_tendancy |  |
| SeasonalWatcherALL\_tendancy |  |
| ClicksEmail\_tendancy | The SCENE member must have clicked at least one email in the past 12 months. |
| ClicksEmail\_value | The key metric recorded in the value field will be the propensity to click on emails based on the following ranges. This will be recorded as LOW, MED or HIGH, not a percentage.  • Percentage of clicked emails = Total clicked emails in past 12 months / Total sent emails in past 12 months  LOW:  • Clicked 1-2% of emails sent if emails sent is equal to or greater than 40  MED:  • Clicked 3-4% of emails sent if emails sent is equal to or greater than 20 OR • Clicked 5-9% of emails sent if emails sent is less than 50 HIGH:  • Clicked 5-9% of emails sent if emails sent is equal to or greater than 50 OR • Clicked 10-100% of emails  DO NOT USE AS THIS INFORMATION IS NO LONGER UP TO DATE. |
| WeekendMatineeViewer\_tendancy |  |
| WeekendMatineeViewer\_value |  |
| WeekdayMatineeViewer\_tendancy |  |
| WeekdayMatineeViewer\_value |  |
| RedemptionYearToDate | This attribute is an indicator for a member who has had one or more redemption in the last 12 months. 1 = yes, 0 = no. |
| RedemptionProgramToDate | This attribute is an indicator for a member who has had one or more redemption in the life of the program. 1 = yes, 0 = no. |

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| **SP\_QualityActivity** | **Table flagging the activity and marketability of a member. Unique at a member level.** |
| Unique\_member\_identifier |  |
| ActivityMonth | Reporting month |
| isQuality | Has the member been Black Card active in the last 12 months and are they currently marketable (either email reachable or SMSable). 1 = yes, 0 = no. |
| isMarketable | Flag showing if member is either Email Reachable of SMSable. 1 = yes, 0 = no |
| isEmailReachable | Flag showing if member has opted into Email communications. 1 = yes, 0 = no |
| isSMS | Flag showing if member has opted into SMS communications. 1 = yes, 0 = no |
| hasActivity | Flag showing is a member has been Black Card Active in the last 12 months. 1 = yes, 0 = no. |

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| **SP\_ActivityStatusScotiaScene\_E** | **Lookup table providing description of activity statuses.** |
| ActivityStatusScotiaScene |  |
| ActivityStatusText |  |
| Text |  |
| isActive | Does not contain information on if a member is Black Card active (see SP\_QualityActivity table for this information) |
| Description | Description of activity status |