Market General Report
2024-2025 Seasons

February 02, 2026

Contents

Dependencies

- 1.0_Data_Pre_Processing.Rmd
- 1.1_Calendar_Generation.Rmd
- 1.3_Order_Data_Variable_Selection.Rmd

Overview

Key variables

- order = one transaction with one customer
- item_name = singular item, entered multiple times/per order if multiple of one item purchased
- item_price = price for one item
- item_gross_amount = total cost before deductions
- item_total_discount = discount rounded to nearest cent

    - item_disc_amount_from_perc and item_net_discount_amount are not rounded to nearest percent.

- item_net_amount = cost after deductions

Should be case:

item_gross_amount - item_total_discount = item_net_amount

Not for 897 records.

```
## [1] 897
```

Variables with issues:

- order_net
- order_profit
- order_amount_collected

A bunch of item_name "Manual Transactions" with negative order_amount_collected

Not used/No Data:

- item_cost
- order_tax
- order_tip_amount
- order_tip_amount_refund
- order_service_charge
- order_non_revenue_amount

Used sometimes, but has issues:

- order_item_cost
- order_item_cost_and_tax

Summary of data
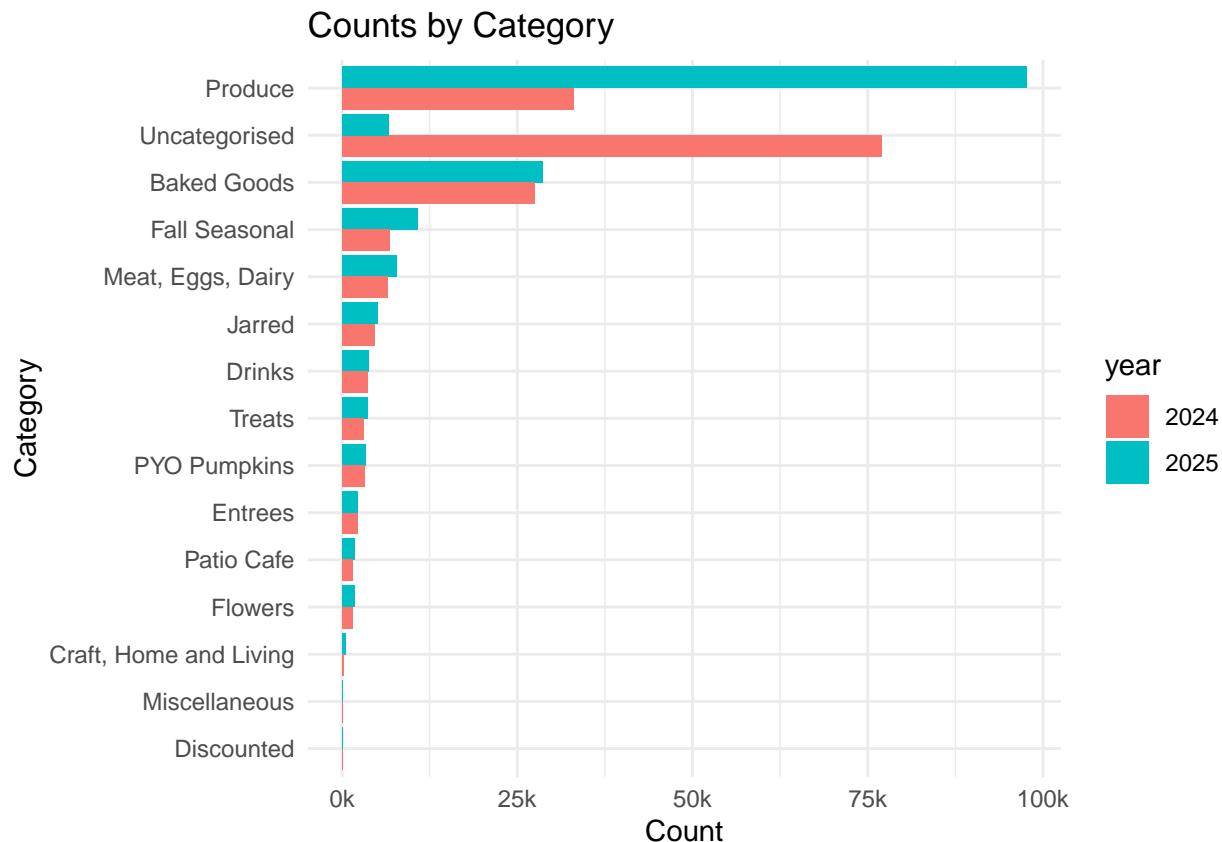
- 344,404 distinct records
- 97,823 unique orders
- average 3.52 items/order

Yearly metrics

```
##                          2024         2025
## records              170,730     173,674
## orders                48,702      49,121
## gross              1,092,376   1,158,738
## net                1,086,359   1,150,062
## discounts               5,915       8,244
## ave_items_per_order      3.506       3.536
## ave_gross_per_order       22.3        23.4
```

Number of Items by Category
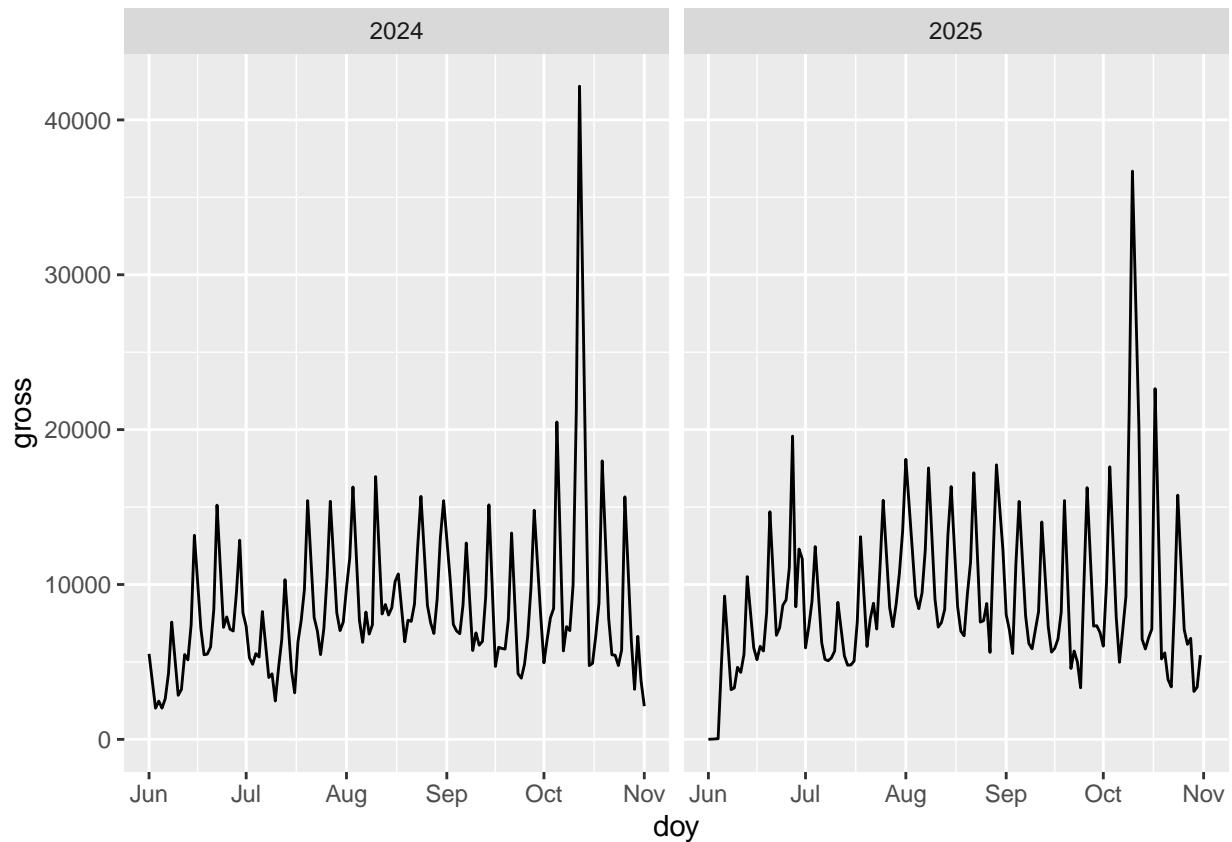
```
## # A tibble: 15 x 4
##    category              '2025' '2024' difference
##    <chr>                 <int>  <int>     <int>
##  1 Produce               97668  33031      64637
##  2 Uncategorised          6695  76949     -70254
##  3 Baked Goods           28558  27413       1145
##  4 Fall Seasonal         10770   6795       3975
##  5 Meat, Eggs, Dairy      7774   6465       1309
##  6 Jarred                 5106   4659        447
##  7 Drinks                 3838   3673        165
##  8 Treats                 3586   3002        584
##  9 PYO Pumpkins           3298   3231         67
## 10 Entrees                2217   2227        -10
## 11 Patio Cafe             1841   1547        294
## 12 Flowers                1753   1471        282
## 13 Craft, Home and Living  536    155        381
## 14 Miscellaneous            32    110        -78
## 15 Discounted                2      2          0
```

Counts by Category

Observations:

- Marked improvement in categorization to 2025.
- Baked goods seem appropriately categorized

Gross Revenue by Date

Note:
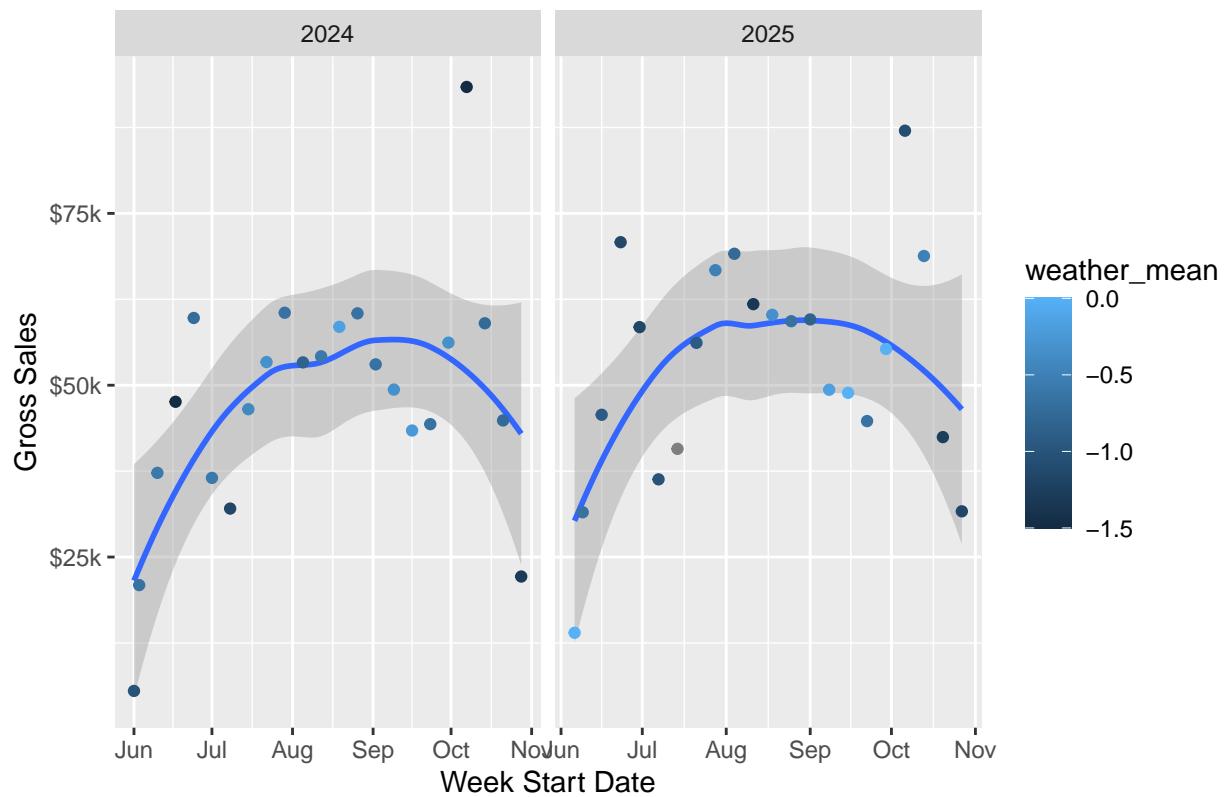
- removing two dates start of 2025 season

    - 2025-06-02 - 2 records
    - 2025-06-05 - 5 records

Weekly Analyis

For studying seasonal effects

Weekly Gross Sales

Gross Sales by Week
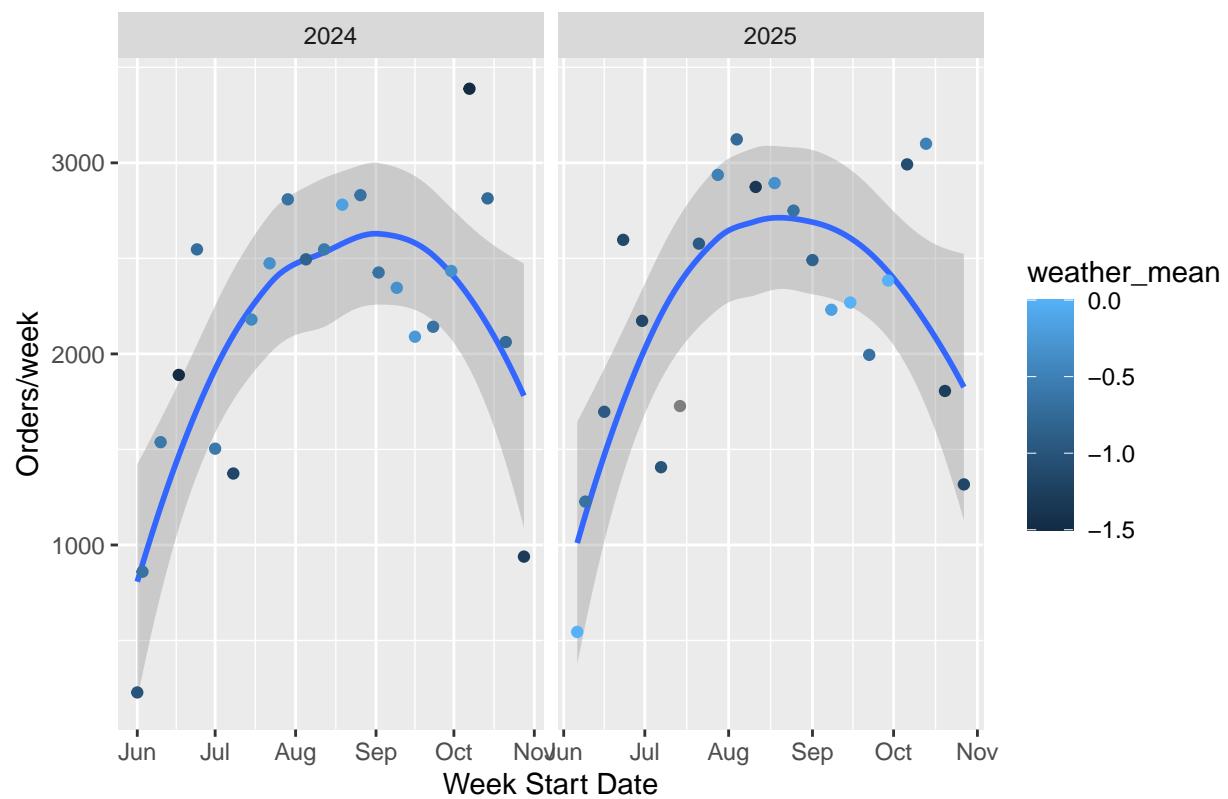
Conclusions:
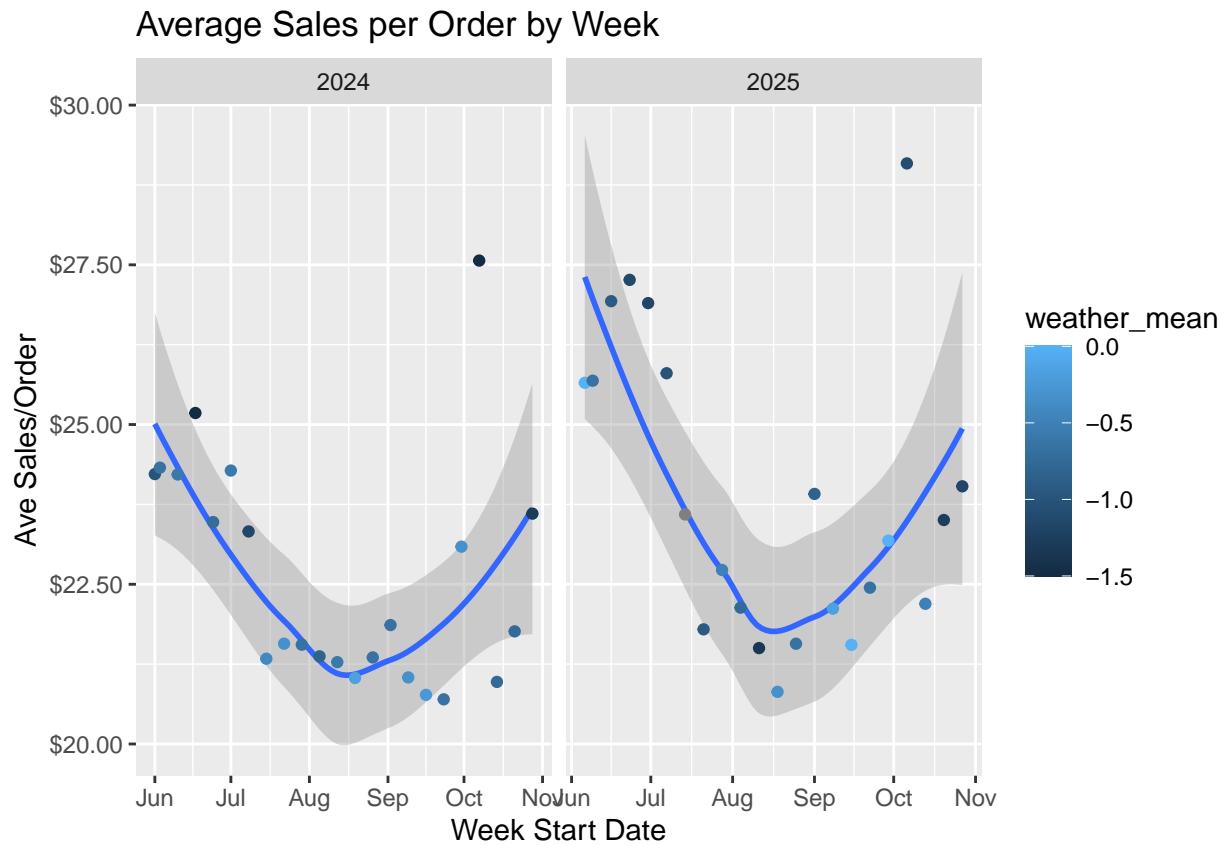
- We have clear indication to use quadratic for modeling week of season effects.
- Bad weather week of Canadian Thanksgiving doesn't appear to impact sales
- In fact, average weather is not great indicator across season

Weekly Orders (Transactions per week)

Number of Orders by Week
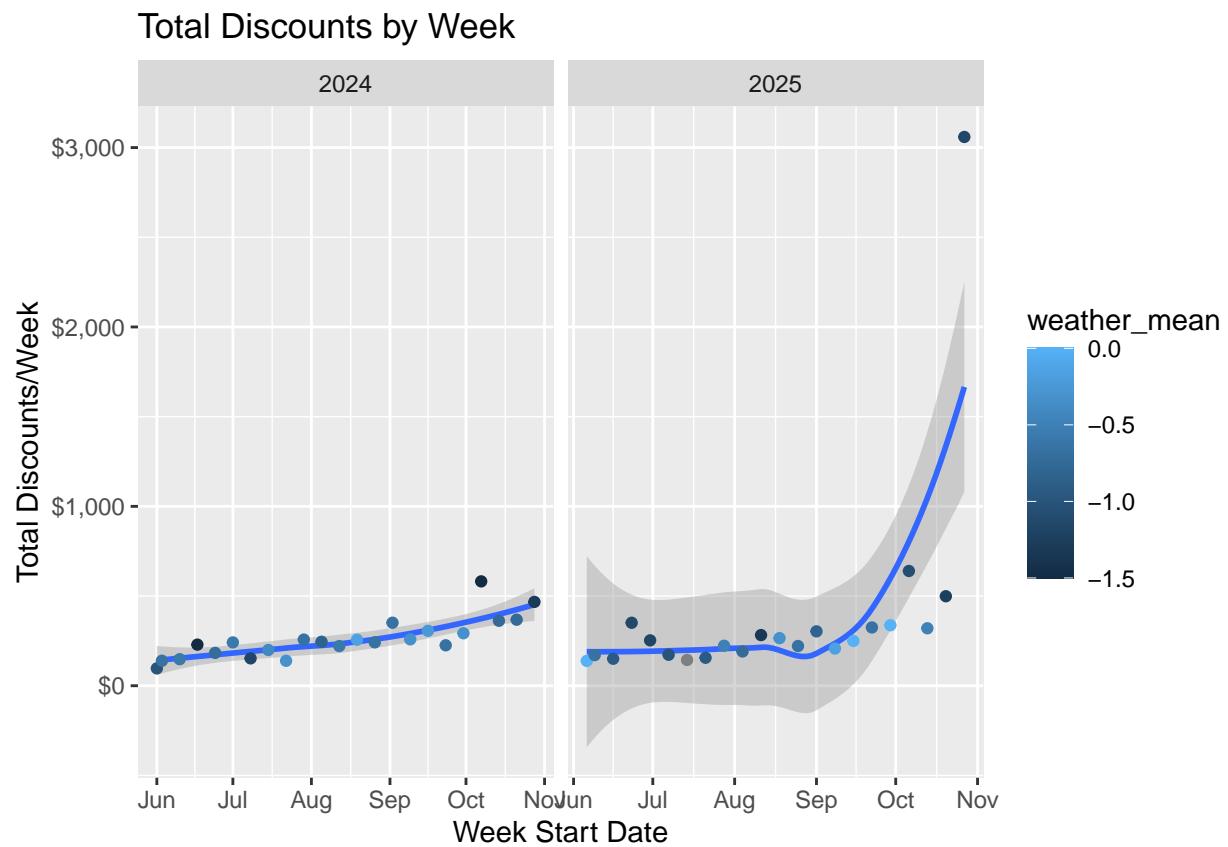
Weekly Average Sales per Order

Average Sales per Order by Week

Notes:

- Higher traffic mid season, lower average orders
  - due to produce sales?
  - other factors

- Strategies to increase size of orders mid-season
  - study small/single item orders
  - market analysis for items that complementary reason for those visits

- I imagine loyal customers are more consistent though out the season
  - ways to track individual customers - large number number use electronic payment
  - use that data to study what promotes customer loyalty

Weekly Total Discounts

Total Discounts by Week
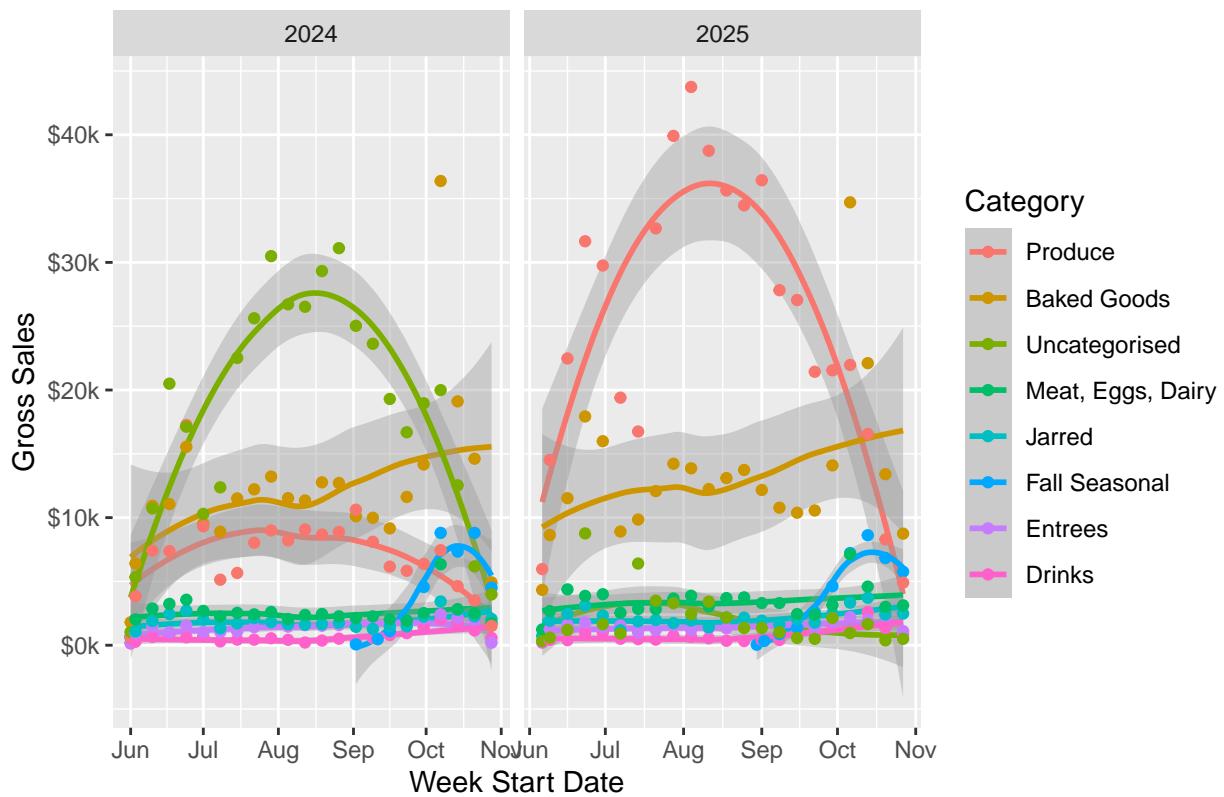
Questions:

- Impact analysis of higher discounting at end of 2025 seasons

Weekly Analysis by Category

Gross Sales by Category and Week (Top 8 Categories)

Recommendation:

- Categorize the items that dominate around Canadian Thanksgiving... Pies??

Weekly Transaction Analysis
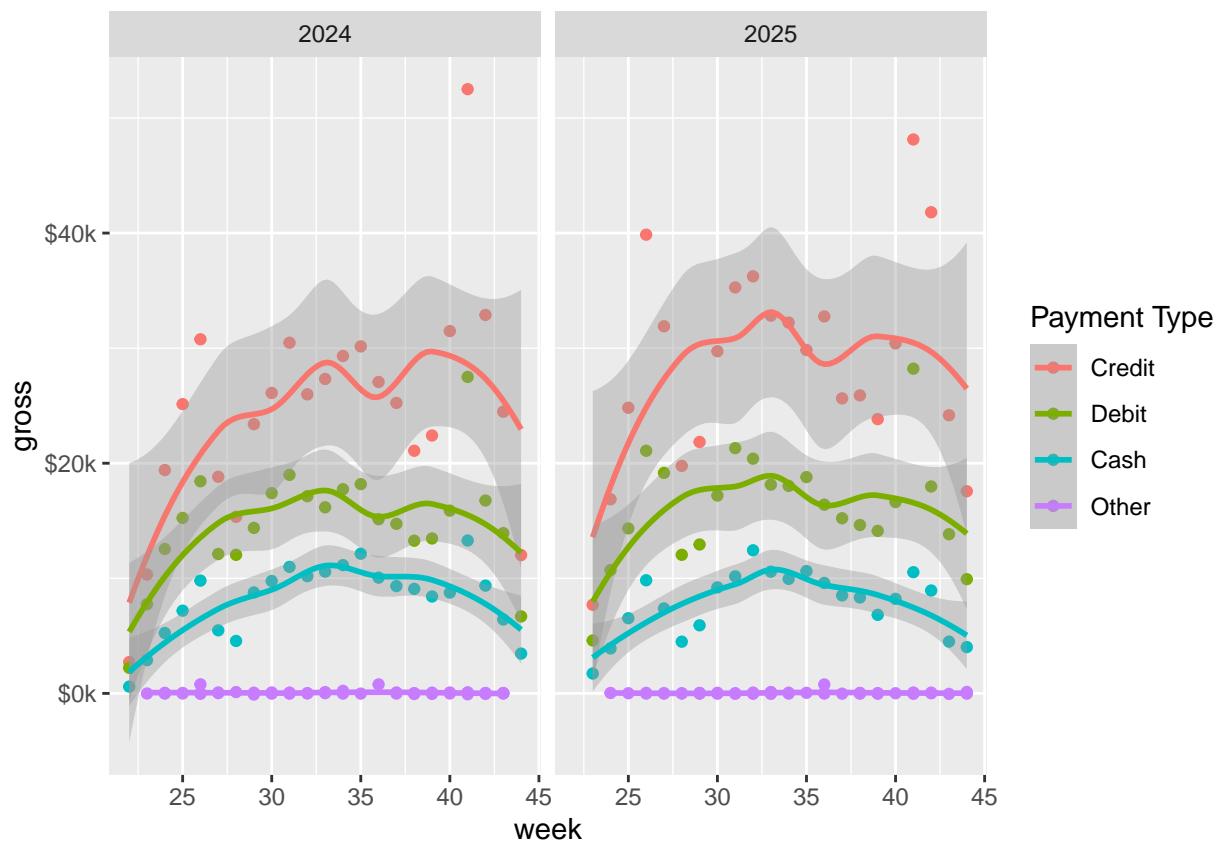
Payment type - just a curiosity at this point.
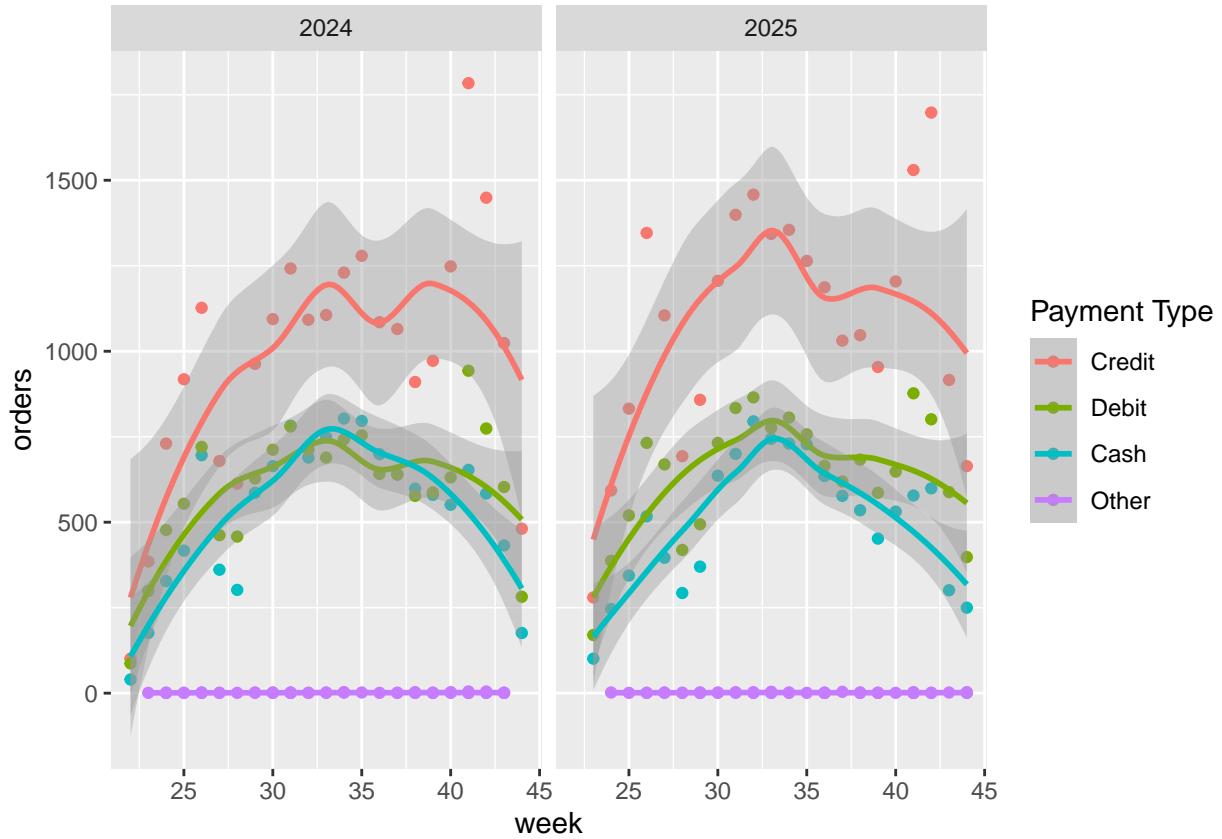
```
##                       payment_type      n
## 1                       Credit Card 175939
## 2                        Debit Card 107285
## 3                              Cash  60697
## 4                 Cash, Debit Card    168
## 5                Cash, Credit Card    128
## 6                              <NA>     67
## 7          Debit Card, Debit Card     23
## 8        Credit Card, Credit Card     22
## 9                Debit Card, Cash     22
## 10                     Cash, Cash     17
## 11        Cash, Cash, Credit Card     16
```

```
## 12                           Credit Card, Cash        14
## 13               Debit Card, Credit Card         5
## 14 Cash, Cash, Cash, Cash, Debit Card         1
```

Miscellaneous Data Features

Discounts

```
##                          order_discount_names      n
## 1                                        <NA> 333936
## 2                              Staff Discount   5549
## 3                               End of Season   3761
## 4                                      10% Off    637
## 5                                      20% Off    136
## 6                                      25% Off     67
## 7                             Milk Jar Deposit     61
## 8                                   $3.00 Off     30
## 9                         $70.00 Off, 10% Off     21
## 10                                     15% Off     21
## 11           End of Season, Staff Discount      15
## 12                                     50% Off     13
## 13                                  $26.50 Off     11
## 14                                  $19.50 Off     10
## 15                                  $20.00 Off     10
## 16              End of Season, $9.25 Off        10
```

```
## 17                                 End of Season, End of Season       9
## 18                                                $11.75 Off          8
## 19                                Staff Discount, End of Season        8
## 20                             Milk Jar Deposit, Staff Discount        7
## 21                                                 $4.00 Off           6
## 22                           Milk Jar Deposit, Milk Jar Deposit        6
## 23 Milk Jar Deposit, Milk Jar Deposit, Milk Jar Deposit              6
## 24                               Staff Discount, Staff Discount        6
## 25                                                 $1.00 Off           5
## 26                                                $12.40 Off           5
## 27                                                $15.55 Off           5
## 28                                             CA$16.95 Off            5
## 29                               End of Season, $20.00 Off             5
## 30                                                 $0.10 Off           4
## 31                                $1.00 Off, End of Season             4
## 32                                                $31.50 Off           4
## 33                                                 $6.00 Off           4
## 34                                                $10.00 Off           3
## 35                                                 $0.45 Off           2
## 36                                                $12.95 Off           2
## 37                                                    40% Off          2
## 38                               Staff Discount, $0.60 Off             2
## 39                                                 $2.00 Off           1
## 40                                                 $2.50 Off           1
## 41                               $3.00 Off, Staff Discount             1
## 42                                                $30.00 Off           1
## 43                                                 $5.00 Off           1
## 44                                                    30% Off          1
## 45                               Staff Discount, $0.02 Off             1
## 46                             Staff Discount, Milk Jar Deposit        1
```

Refunds

11 total refunds:

- Are these returns? Below are the records of refunded orders
- Omit from analysis?

```
##           merchant_name trx_type      device_name          order order_type
## 1  Reesors Farm Market    ORDER C055UQ33030536 2VTES70QABN0J           NA
## 2  Reesors Farm Market    ORDER C055UQ33030536 2VTES70QABN0J           NA
## 3  Reesors Farm Market    ORDER C055UQ33030536 2VTES70QABN0J           NA
## 4  Reesors Farm Market    ORDER C055UQ33030536 46CMFWPN6EFWE           NA
## 5  Reesors Farm Market    ORDER          Lane 1 BDNYE4QFJBC52           NA
## 6  Reesors Farm Market    ORDER          Lane 1 BDNYE4QFJBC52           NA
## 7  Reesors Farm Market    ORDER C055UQ33030536 7ADSS433R2KS6           NA
## 8  Reesors Farm Market    ORDER C055UQ33030536 7ADSS433R2KS6           NA
```

```
## 9  Reesors Farm Market    ORDER C055UQ33030536 7ADSS433R2KS6        NA
## 10 Reesors Farm Market    ORDER         Lane 1 60N014Q8HPJXG        NA
## 11 Reesors Farm Market    ORDER         Lane 1 60N014Q8HPJXG        NA
##    order_note       date original_date       day week      hour
## 1        <NA> 2024-06-05    2024-06-05 Wednesday   23 09 (9AM)
## 2        <NA> 2024-06-05    2024-06-05 Wednesday   23 09 (9AM)
## 3        <NA> 2024-06-05    2024-06-05 Wednesday   23 09 (9AM)
## 4        <NA> 2024-06-21    2024-06-21    Friday   25 10 (10AM)
## 5        <NA> 2024-08-19    2024-08-19    Monday   34 13 (1PM)
## 6        <NA> 2024-08-19    2024-08-19    Monday   34 13 (1PM)
## 7        <NA> 2025-06-12    2025-06-12  Thursday   24 16 (4PM)
## 8        <NA> 2025-06-12    2025-06-12  Thursday   24 16 (4PM)
## 9        <NA> 2025-06-12    2025-06-12  Thursday   24 16 (4PM)
## 10       <NA> 2025-10-22    2025-10-22 Wednesday   43 14 (2PM)
## 11       <NA> 2025-10-22    2025-10-22 Wednesday   43 14 (2PM)
##              daypart       time      employee payment_type payment_date
## 1  Part 2 (08:00-10:00)  9H 17M 0S Nancy Watson         Cash   2024-06-05
## 2  Part 2 (08:00-10:00)  9H 17M 0S Nancy Watson         Cash   2024-06-05
## 3  Part 2 (08:00-10:00)  9H 17M 0S Nancy Watson         Cash   2024-06-05
## 4  Part 3 (10:00-14:00) 10H 40M 0S         <NA>         Cash   2024-06-21
## 5  Part 3 (10:00-14:00)  13H 4M 0S         <NA>  Credit Card   2024-08-19
## 6  Part 3 (10:00-14:00)  13H 4M 0S         <NA>  Credit Card   2024-08-19
## 7  Part 5 (16:00-19:00) 16H 21M 0S  Sara Alcorn         Cash   2025-06-12
## 8  Part 5 (16:00-19:00) 16H 21M 0S  Sara Alcorn         Cash   2025-06-12
## 9  Part 5 (16:00-19:00) 16H 21M 0S  Sara Alcorn         Cash   2025-06-12
## 10 Part 4 (14:00-16:00) 14H 21M 0S Kym Clements         Cash   2025-10-22
## 11 Part 4 (14:00-16:00) 14H 21M 0S Kym Clements         Cash   2025-10-22
##    payment_time card_type order_amount order_payment order_payment_with_tips
## 1         09:18      <NA>        35.65         35.65                   35.65
## 2         09:18      <NA>        35.65         35.65                   35.65
## 3         09:18      <NA>        35.65         35.65                   35.65
## 4         10:40      <NA>         6.50          6.50                    6.50
## 5         13:04        MC        12.25         12.25                   12.25
## 6         13:04        MC        12.25         12.25                   12.25
## 7         16:21      <NA>         6.00          6.00                    6.00
## 8         16:21      <NA>         6.00          6.00                    6.00
## 9         16:21      <NA>         6.00          6.00                    6.00
## 10        14:22      <NA>         4.64          4.64                    4.64
## 11        14:22      <NA>         4.64          4.64                    4.64
##    order_payment_refund_amount order_payment_gross_tax order_payment_tax
## 1                        35.65                       0                 0
## 2                        35.65                       0                 0
## 3                        35.65                       0                 0
## 4                         6.50                       0                 0
## 5                        12.25                       0                 0
## 6                        12.25                       0                 0
## 7                         6.00                       0                 0
## 8                         6.00                       0                 0
```

```
## 9                       6.00                          0                  0
## 10                      4.64                          0                  0
## 11                      4.64                          0                  0
##    order_payment_minus_refunds order_no_of_items order_no_of_refunded_items
## 1                            0              3.00                          3
## 2                            0              3.00                          3
## 3                            0              3.00                          3
## 4                            0              1.00                          1
## 5                            0              2.00                          2
## 6                            0              2.00                          2
## 7                            0              3.00                          3
## 8                            0              3.00                          3
## 9                            0              3.00                          3
## 10                           0              1.03                          2
## 11                           0              1.03                          2
##    order_gross order_refund order_total_refund order_total_discount
## 1        35.65        35.65              35.65                    0
## 2        35.65        35.65              35.65                    0
## 3        35.65        35.65              35.65                    0
## 4         6.50         6.50               6.50                    0
## 5        12.25        12.25              12.25                    0
## 6        12.25        12.25              12.25                    0
## 7         6.00         6.00               6.00                    0
## 8         6.00         6.00               6.00                    0
## 9         6.00         6.00               6.00                    0
## 10        4.64         4.64               4.64                    0
## 11        4.64         4.64               4.64                    0
##    order_discount_names order_discount_percent order_discount_amount order_net
## 1                  <NA>                      0                     0         0
## 2                  <NA>                      0                     0         0
## 3                  <NA>                      0                     0         0
## 4                  <NA>                      0                     0         0
## 5                  <NA>                      0                     0         0
## 6                  <NA>                      0                     0         0
## 7                  <NA>                      0                     0         0
## 8                  <NA>                      0                     0         0
## 9                  <NA>                      0                     0         0
## 10                 <NA>                      0                     0         0
## 11                 <NA>                      0                     0         0
##    order_tax order_item_cost order_cost_and_tax order_profit
## 1          0               0                  0            0
## 2          0               0                  0            0
## 3          0               0                  0            0
## 4          0               0                  0            0
## 5          0               0                  0            0
## 6          0               0                  0            0
## 7          0               0                  0            0
## 8          0               0                  0            0
```

```
## 9            0            0              0            0
## 10           0            0              0            0
## 11           0            0              0            0
##    order_amount_collected tax_removed is_vat pay_type manual_transaction
## 1                       0       FALSE  FALSE     FULL              FALSE
## 2                       0       FALSE  FALSE     FULL              FALSE
## 3                       0       FALSE  FALSE     FULL              FALSE
## 4                       0       FALSE  FALSE     FULL              FALSE
## 5                       0       FALSE  FALSE     FULL              FALSE
## 6                       0       FALSE  FALSE     FULL              FALSE
## 7                       0       FALSE  FALSE     FULL              FALSE
## 8                       0       FALSE  FALSE     FULL              FALSE
## 9                       0       FALSE  FALSE     FULL              FALSE
## 10                      0       FALSE  FALSE     FULL              FALSE
## 11                      0       FALSE  FALSE     FULL              FALSE
##          item_id sku                   item_name  item_code note refunded
## 1  EN0QFFV4G7DK4  NA              Beets, Baskets         NA <NA>     TRUE
## 2  53B2F0VP482SJ  NA                   Peach Pie 200010714953 <NA>     TRUE
## 3  53B2F0VP482SJ  NA                   Peach Pie 200010714953 <NA>     TRUE
## 4          <NA>  NA                 Custom Item         NA <NA>     TRUE
## 5  DZQCB3N7T3STT  NA Reesor's Sweet Corn Dozen (13)        NA <NA>     TRUE
## 6  6ED509PQ43VR4  NA       Pecan Butter Tart Treat  308002751 <NA>     TRUE
## 7  VM6P5DXTPTFQ2  NA       Bell Peppers, All Colours        NA <NA>     TRUE
## 8  VM6P5DXTPTFQ2  NA       Bell Peppers, All Colours        NA <NA>     TRUE
## 9  VM6P5DXTPTFQ2  NA       Bell Peppers, All Colours        NA <NA>     TRUE
## 10 FNP8WJ7B5FXYW  NA             Heirloom Carrots         NA <NA>     TRUE
## 11 8JAE1FRW7FYAJ  NA             Green Beans Loose         NA <NA>     TRUE
##    is_revenue exchanged       tag      tag1      tag2      tag3      category
## 1        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled Uncategorised
## 2        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled Uncategorised
## 3        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled Uncategorised
## 4        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled Uncategorised
## 5        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled Uncategorised
## 6        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled     Patio Cafe
## 7        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled        Produce
## 8        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled        Produce
## 9        TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled        Produce
## 10       TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled        Produce
## 11       TRUE     FALSE Unlabeled Unlabeled Unlabeled Unlabeled        Produce
##        category1     category2     category3 modifiers item_price item_cost
## 1  Uncategorised Uncategorised Uncategorised        NA       5.75         0
## 2  Uncategorised Uncategorised Uncategorised        NA      14.95         0
## 3  Uncategorised Uncategorised Uncategorised        NA      14.95         0
## 4  Uncategorised Uncategorised Uncategorised        NA       6.50         0
## 5  Uncategorised Uncategorised Uncategorised        NA       9.50         0
## 6    Baked Goods    Patio Cafe Uncategorised        NA       2.75         0
## 7        Produce Uncategorised Uncategorised        NA       2.00         0
## 8        Produce Uncategorised Uncategorised        NA       2.00         0
```

```
## 9        Produce Uncategorised Uncategorised        NA      2.00       0
## 10       Produce Uncategorised Uncategorised        NA      3.59       0
## 11       Produce Uncategorised Uncategorised        NA      1.05       0
##    item_discount_names item_discount_in_percent itm_disc_amount_from_perc
## 1                 <NA>                        0                         0
## 2                 <NA>                        0                         0
## 3                 <NA>                        0                         0
## 4                 <NA>                        0                         0
## 5                 <NA>                        0                         0
## 6                 <NA>                        0                         0
## 7                 <NA>                        0                         0
## 8                 <NA>                        0                         0
## 9                 <NA>                        0                         0
## 10                <NA>                        0                         0
## 11                <NA>                        0                         0
##    item_discount_in_amount itm_disc_amount_from_perc_on_order
## 1                        0                                  0
## 2                        0                                  0
## 3                        0                                  0
## 4                        0                                  0
## 5                        0                                  0
## 6                        0                                  0
## 7                        0                                  0
## 8                        0                                  0
## 9                        0                                  0
## 10                       0                                  0
## 11                       0                                  0
##    item_net_discount_amount item_tax_amount item_gross_amount item_total_refund
## 1                         0               0              5.75              5.75
## 2                         0               0             14.95             14.95
## 3                         0               0             14.95             14.95
## 4                         0               0              6.50              6.50
## 5                         0               0              9.50              9.50
## 6                         0               0              2.75              2.75
## 7                         0               0              2.00              2.00
## 8                         0               0              2.00              2.00
## 9                         0               0              2.00              2.00
## 10                        0               0              3.59              3.59
## 11                        0               0              1.05              1.05
##    item_total_discount item_net_amount tax_rate tax_rates      tax_name
## 1                    0               0        0         0 NO_TAX_APPLIED
## 2                    0               0        0         0 NO_TAX_APPLIED
## 3                    0               0        0         0 NO_TAX_APPLIED
## 4                    0               0        0         0 NO_TAX_APPLIED
## 5                    0               0        0         0 NO_TAX_APPLIED
## 6                    0               0        0         0 NO_TAX_APPLIED
## 7                    0               0        0         0 NO_TAX_APPLIED
## 8                    0               0        0         0 NO_TAX_APPLIED
```

```
## 9                     0           0        0          0 NO_TAX_APPLIED
## 10                    0           0        0          0 NO_TAX_APPLIED
## 11                    0           0        0          0 NO_TAX_APPLIED
##        tax_names customer_name customer_id customer_emails
## 1  NO_TAX_APPLIED            NA          NA              NA
## 2  NO_TAX_APPLIED            NA          NA              NA
## 3  NO_TAX_APPLIED            NA          NA              NA
## 4  NO_TAX_APPLIED            NA          NA              NA
## 5  NO_TAX_APPLIED            NA          NA              NA
## 6  NO_TAX_APPLIED            NA          NA              NA
## 7  NO_TAX_APPLIED            NA          NA              NA
## 8  NO_TAX_APPLIED            NA          NA              NA
## 9  NO_TAX_APPLIED            NA          NA              NA
## 10 NO_TAX_APPLIED            NA          NA              NA
## 11 NO_TAX_APPLIED            NA          NA              NA
##    customer_phone_numbers customer_note year
## 1                      NA            NA 2024
## 2                      NA            NA 2024
## 3                      NA            NA 2024
## 4                      NA            NA 2024
## 5                      NA            NA 2024
## 6                      NA            NA 2024
## 7                      NA            NA 2025
## 8                      NA            NA 2025
## 9                      NA            NA 2025
## 10                     NA            NA 2025
## 11                     NA            NA 2025
```

Notes

Here is the notes field. Most from 2024. Assume no useful information here.

```
##                       note year n
## 1         Tomato Baskets 2024 5
## 2                  Beets 2024 2
## 3                 carrots 2024 2
## 4                Delivery 2024 1
## 5 Honest Realtors Deposit 2024 1
## 6 MSH 125 Adult Admission 2024 1
## 7               Soup box  2024 1
## 8         5 box tomatoes 2025 1
## 9                   6.95 2025 1
```