Paidy_Data_Analysis

August 15, 2023

```
[156]:
       import pandas as pd
[157]:
       import os
       print(os.getcwd()) # Location
      C:\Users\ddaya\OneDrive\Documents\R
[159]: pd.read_csv("Paidy_Data.csv") # current working directory
[159]:
         api_key
                                      logo_url
                                                 closed
                                                                                 metadata
                                                      0
          abc123
                    https://example.com/logo1
                                                                                        {}
                    https://example.com/logo2
                                                      1
                                                                     {\key\": \"value\"}"
          xyz789
          mno456
                    https://example.com/logo3
                                                      0
                                                            {\key\": \"another_value\"}"
                    https://example.com/logo4
                                                          {\key\": \"different_value\"}"
       3
          pgr789
                                                      1
          lmn123
                    https://example.com/logo5
                                                      0
                                                                                        {}
                    https://example.com/logo6
                                                                {\key\": \"new_value\"}"
       5 efg456
                                                      1
       6 hij789
                    https://example.com/logo7
                                                      0
                                                                                        {}
       7
          xyz123
                    https://example.com/logo8
                                                      1
                                                             {\key\": \"unique_value\"}"
          uvw456
                    https://example.com/logo9
                                                             {\key\": \"sample_value\"}"
                                                      0
          rst789
                   https://example.com/logo10
                                                      1
                                                                                        {}
          PAYLOAD_ID
                       AMOUNT CURRENCY STORE NAME
                                                     BUYER_ID
                                                                ORDER_ID
       0
                    1
                       100.00
                                    USD
                                            Store A
                                                             1
                                                                      101
                                                             2
       1
                    2
                       200.50
                                    EUR
                                            Store B
                                                                      102
       2
                        50.25
                                    GBP
                                                             3
                    3
                                            Store C
                                                                      103
       3
                    4
                       300.75
                                    USD
                                            Store D
                                                             4
                                                                      104
       4
                    5
                       150.50
                                    EUR
                                            Store E
                                                             5
                                                                      105
       5
                    6
                        75.00
                                            Store F
                                                             6
                                    GBP
                                                                      106
                    7
                                                             7
       6
                       500.25
                                    USD
                                            Store G
                                                                      107
       7
                       250.75
                                    EUR
                                            Store H
                                                             8
                                                                      108
       8
                    9
                       120.00
                                    GBP
                                            Store I
                                                             9
                                                                      109
       9
                       350.25
                                    USD
                                                            10
                                                                      110
                   10
                                            Store J
              DESCRIPTION METADATA
                                      buyer_id
                                                                Email
                                                                          name1
                                                                                    name2
       0
            First payload
                                                  buyer1@example.com
                                                                                       Doe
                              Meta 1
                                              1
                                                                           John
       1
           Second payload
                              Meta 2
                                              2
                                                  buyer2@example.com
                                                                           Jane
                                                                                     Smith
       2
            Third payload
                              Meta 3
                                              3
                                                  buyer3@example.com
                                                                        Michael
                                                                                   Johnson
```

```
3
    Fourth payload
                       Meta 4
                                        4
                                            buyer4@example.com
                                                                     Emily
                                                                            Williams
4
                       Meta 5
                                        5
     Fifth payload
                                            buyer5@example.com
                                                                    David
                                                                                Brown
5
     Sixth payload
                       Meta 6
                                        6
                                            buyer6@example.com
                                                                     Sarah
                                                                                Jones
                       Meta 7
                                        7
6
   Seventh payload
                                            buyer7@example.com
                                                                    Robert
                                                                               Miller
7
    Eighth payload
                       Meta 8
                                        8
                                            buyer8@example.com
                                                                      Lisa
                                                                                Davis
8
     Ninth payload
                       Meta 9
                                        9
                                            buyer9@example.com
                                                                  William
                                                                               Taylor
9
     Tenth payload
                      Meta 10
                                           buyer10@example.com
                                                                   Olivia
                                       10
                                                                            Anderson
                              buyer_data_id
                                              buyer id.1
                                                            user id
                                                                      age
        phone
                        dob
   1234567890
                 5/15/1990
                                           1
                                                                123
                                                                       31
0
                                                        1
                                           2
                                                        2
   9876543210
                10/22/1985
                                                                456
                                                                       38
2
   5551234567
                 3/10/1978
                                           3
                                                        3
                                                                789
                                                                       45
3
   8889876543
                 12/1/1995
                                           4
                                                        4
                                                                101
                                                                       29
4
   4445678901
                  7/8/1982
                                           5
                                                        5
                                                                202
                                                                       41
                                           6
                                                        1
5
   3332345678
                 9/25/1998
                                                                303
                                                                       26
                                           7
                                                        2
6
   2223456789
                11/12/1972
                                                                404
                                                                       29
7
                                           8
                                                        3
   7774567890
                                                                505
                                                                       56
                 6/18/1989
                                           9
                                                        4
                                                                606
                                                                       33
8
   6663456789
                 4/30/1993
                                          10
                                                        5
   1112345678
                   2/5/2000
                                                                707
                                                                       28
  age_platform account_reg_date
                                    days_since_1st_tx
                                                           ltv
                                                                order_count
                                                                               \
0
       Android
                                                           500
                                                                          10
                        8/15/2015
                                                    120
1
            iOS
                        3/22/2018
                                                     60
                                                           800
                                                                          15
2
       Android
                                                    180
                                                          1000
                                                                          20
                        12/5/2012
3
            iOS
                        7/20/2020
                                                     30
                                                           300
                                                                           5
4
       Android
                        4/18/2017
                                                     90
                                                           700
                                                                          12
5
            iOS
                       10/10/2019
                                                     45
                                                           400
                                                                           8
6
       Android
                                                    150
                                                           900
                                                                          18
                        2/28/2016
7
            iOS
                        7/15/2013
                                                    300
                                                          1200
                                                                          24
                                                     15
                                                           200
                                                                           4
8
       Android
                         4/3/2021
                                                                          14
9
            iOS
                         9/9/2018
                                                     75
                                                           600
                     last_order_at last_order_date
                                                       order_amt_last3m
   last_order_amt
0
                50
                                NaN
                                           6/28/2023
                                                                      300
                75
                                                                      200
1
                                NaN
                                            7/8/2023
2
               100
                                NaN
                                           6/12/2023
                                                                      350
3
                30
                                NaN
                                            7/2/2023
                                                                      150
4
                80
                                NaN
                                           6/18/2023
                                                                      250
5
                40
                                NaN
                                            7/6/2023
                                                                      180
6
                90
                                NaN
                                           6/22/2023
                                                                      300
7
               120
                                NaN
                                                                      400
                                           7/12/2023
8
                20
                                NaN
                                           6/28/2023
                                                                      100
9
                70
                                NaN
                                            7/3/2023
                                                                      220
                         additional_ship_ad
                                                  billing_address
   order_count_last3m
0
                         Shipping Address 1
                                               Billing Address 1
1
                         Shipping Address 2
                                               Billing Address 2
```

```
2
                        Shipping Address 3 Billing Address 3
3
                                              Billing Address 4
                        Shipping Address 4
4
                        Shipping Address 5
                                              Billing Address 5
5
                        Shipping Address 1
                                              Billing Address 1
6
                        Shipping Address 2 Billing Address 2
7
                        Shipping Address 3 Billing Address 3
8
                        Shipping Address 4 Billing Address 4
9
                        Shipping Address 5 Billing Address 5
                       gender
                                subscription_count prev_payment_meth
  delivery_locn_type
0
                Urban
                         Male
                                                  3
                                                           Credit Card
1
            Suburban
                      Female
                                                  5
                                                                PayPal
                                                  2
2
                Rural
                         Male
                                                            Debit Card
3
                Urban
                      Female
                                                  1
                                                                PayPal
4
                         Male
                                                  4
                                                           Credit Card
            Suburban
5
                Urban
                       Female
                                                  2
                                                                PayPal
6
                         Male
                                                  3
                                                            Debit Card
            Suburban
7
                       Female
                                                  5
                                                                PavPal
                Rural
                         Male
8
                Urban
                                                  1
                                                           Credit Card
9
            Suburban
                       Female
                                                            Debit Card
                                        order_id order_ref
   number_of_points order_item_categ
                                                              shipping
                                                                          tax
0
                 200
                          Electronics
                                                1
                                                      OR123
                                                                  10.0
                                                                         5.00
                                                2
                                                                   7.0
                                                                         3.50
1
                 150
                                                      OR456
                              Clothing
2
                 300
                          Electronics
                                                3
                                                      OR789
                                                                  12.0
                                                                         6.00
3
                  50
                              Clothing
                                                4
                                                      OR101
                                                                   8.0
                                                                        4.00
                          Electronics
                                                      OR202
4
                 180
                                                5
                                                                  15.0 7.50
5
                 120
                              Clothing
                                                6
                                                      OR303
                                                                   6.0 3.00
                                                7
                                                                        4.50
6
                 250
                          Electronics
                                                      OR404
                                                                   9.0
7
                 450
                                                8
                                                      OR505
                                                                  11.0 5.50
                              Clothing
8
                  75
                          Electronics
                                                9
                                                      OR606
                                                                   7.5 3.75
9
                 200
                                                      OR707
                                                                  13.0 6.50
                              Clothing
                                               10
                         quantity
   item_id
            order_id.1
                                        title
                                                unit_price description
0
         1
                      1
                                    Product A
                                                         25
                                                                 Item A
1
         2
                      1
                                    Product B
                                                         15
                                                                 Item B
2
         3
                      2
                                 1
                                    Product C
                                                         20
                                                                 Ttem C
3
         4
                      2
                                 2
                                    Product D
                                                         10
                                                                 Item D
                                                                 Item E
4
         5
                      3
                                 3
                                    Product E
                                                         30
5
         6
                      3
                                 1
                                    Product F
                                                         40
                                                                 Item F
6
         7
                                 2 Product G
                                                                 Item G
                      4
                                                         15
7
                                    Product H
                                                                 Item H
         8
                      4
                                                         50
8
         9
                      5
                                    Product I
                                                         35
                                                                 Item I
9
        10
                      5
                                 4 Product J
                                                         12
                                                                 Ttem J
   shipping_addr_id
                     buyer_id.2
                                            line1
                                                           line2
                                                                            city
0
                   1
                                1
                                     123 Main St
                                                          Apt 4B
                                                                        New York
```

```
2
                           3
                                        3
                                              789 Oak Ave
                                                                 Suite 5
                                                                                  Chicago
       3
                           4
                                        4
                                             101 Maple St
                                                                      NaN
                                                                                  Houston
                           5
       4
                                        5
                                              202 Pine Rd
                                                            Apartment 10
                                                                                    Miami
       5
                           6
                                        1
                                            303 Cedar St
                                                                      NaN
                                                                                  Seattle
       6
                           7
                                        2
                                             404 Birch Ln
                                                                 Unit 15
                                                                                   Boston
       7
                           8
                                        3
                                               505 Elm St
                                                                      NaN
                                                                                   Denver
       8
                           9
                                        4
                                               606 Oak Rd
                                                                      NaN
                                                                                  Atlanta
       9
                          10
                                        5
                                           707 Maple Ave
                                                                      NaN
                                                                           San Francisco
         state
                   zip
       0
             NY
                 10001
       1
             CA
                 90001
       2
             ΙL
                 60601
       3
             ΤX
                 77002
       4
             FL
                 33101
       5
             WA
                 98101
       6
             MA
                  2201
       7
             CO
                 80201
       8
             GA
                 30301
             CA
                 94101
[160]: pd.read_csv("C:\\Users\\ddaya\\OneDrive\\Documents\\R\\Paidy_Data.csv") #__
        \rightarrowManual directory
[160]:
         api_key
                                       logo_url
                                                  closed
                                                                                   metadata \
          abc123
                    https://example.com/logo1
                                                       0
                                                                                          {}
       1
          xyz789
                    https://example.com/logo2
                                                       1
                                                                      {\key\": \"value\"}"
       2
          mno456
                    https://example.com/logo3
                                                       0
                                                             {\key\": \"another value\"}"
          pgr789
                    https://example.com/logo4
                                                       1
                                                           {\key\": \"different_value\"}"
       3
                    https://example.com/logo5
                                                       0
       4
         lmn123
                                                                  {\key\": \"new_value\"}"
       5
          efg456
                    https://example.com/logo6
                                                       1
         hij789
                    https://example.com/logo7
                                                       0
       6
                                                              {\key\": \"unique_value\"}"
       7
          xyz123
                    https://example.com/logo8
                                                       1
       8 uvw456
                    https://example.com/logo9
                                                       0
                                                              {\key\": \"sample_value\"}"
          rst789
                   https://example.com/logo10
                                                       1
                                                                                          {}
                        AMOUNT CURRENCY STORE_NAME
                                                      BUYER ID
                                                                 ORDER_ID
          PAYLOAD_ID
       0
                    1
                        100.00
                                     USD
                                             Store A
                                                              1
                                                                       101
                    2
                                                              2
                        200.50
                                     EUR
                                            Store B
                                                                       102
       1
       2
                    3
                         50.25
                                     GBP
                                            Store C
                                                              3
                                                                       103
       3
                    4
                        300.75
                                     USD
                                            Store D
                                                              4
                                                                       104
       4
                        150.50
                                                              5
                                                                       105
                    5
                                     EUR
                                            Store E
                                                              6
       5
                    6
                        75.00
                                     GBP
                                            Store F
                                                                       106
       6
                    7
                        500.25
                                     USD
                                            Store G
                                                              7
                                                                       107
       7
                    8
                        250.75
                                     EUR
                                            Store H
                                                              8
                                                                       108
       8
                        120.00
                                     GBP
                                            Store I
                                                              9
                                                                       109
```

1

2

2

456 Elm Rd

Unit 202

Los Angeles

9 USD 10 350.25 Store J 10 110 DESCRIPTION METADATA buyer_id Email name1 name2 0 Doe First payload Meta 1 buyer1@example.com John 1 Second payload Meta 2 2 buyer2@example.com Jane Smith 1 3 2 Third payload Meta 3 buyer3@example.com Michael Johnson 3 Fourth payload Meta 4 4 buyer4@example.com Williams Emily 4 Fifth payload 5 Meta 5 buyer5@example.com David Brown Sixth payload 6 buyer6@example.com 5 Meta 6 Sarah Jones 6 Seventh payload Meta 7 7 buyer7@example.com Robert Miller 7 Eighth payload Meta 8 8 buyer8@example.com Lisa Davis 8 Ninth payload Meta 9 buyer9@example.com William Taylor 9 Tenth payload Meta 10 10 buyer10@example.com Olivia Anderson user_id buyer_data_id buyer_id.1 age phone dob 5/15/1990 0 1234567890 123 31 2 2 456 38 1 9876543210 10/22/1985 2 5551234567 3 3 789 45 3/10/1978 4 4 3 8889876543 12/1/1995 101 29 5 5 4445678901 7/8/1982 202 41 5 6 303 3332345678 9/25/1998 1 26 6 2223456789 7 2 404 29 11/12/1972 7 7774567890 6/18/1989 8 3 505 56 9 4 8 6663456789 4/30/1993 606 33 1112345678 2/5/2000 10 5 707 28 age_platform account_reg_date days_since_1st_tx ltv order_count 0 Android 8/15/2015 500 120 10 1 iOS 3/22/2018 60 800 15 2 180 1000 20 Android 12/5/2012 3 iOS 30 300 5 7/20/2020 4 90 700 12 Android 4/18/2017 5 8 45 400 iOS 10/10/2019 6 150 18 Android 2/28/2016 900 7 iOS 7/15/2013 300 1200 24 8 Android 4/3/2021 15 200 4 9 iOS 9/9/2018 75 600 14 last_order_amt last_order_at last_order_date order amt last3m 0 50 NaN 6/28/2023 300 1 75 NaN 200 7/8/2023 2 100 NaN 6/12/2023 350 3 30 NaN 7/2/2023 150 4 80 NaN 6/18/2023 250 5 40 NaN 180 7/6/2023 6 90 NaN 6/22/2023 300 7 120 NaN 7/12/2023 400

```
100
8
                20
                               NaN
                                         6/28/2023
9
                70
                                          7/3/2023
                                                                   220
                               NaN
   order_count_last3m
                        additional_ship_ad
                                                billing_address
0
                        Shipping Address 1
                                             Billing Address 1
                        Shipping Address 2
1
                                             Billing Address 2
2
                        Shipping Address 3
                                             Billing Address 3
3
                                            Billing Address 4
                     3
                        Shipping Address 4
4
                        Shipping Address 5
                                             Billing Address 5
                     6
5
                        Shipping Address 1
                                             Billing Address 1
6
                     7
                        Shipping Address 2 Billing Address 2
7
                        Shipping Address 3 Billing Address 3
8
                     2
                        Shipping Address 4 Billing Address 4
9
                        Shipping Address 5 Billing Address 5
  delivery_locn_type
                       gender
                               subscription_count prev_payment_meth \
                Urban
                         Male
                                                          Credit Card
0
                                                  3
1
            Suburban
                       Female
                                                  5
                                                               PavPal
2
                         Male
                                                  2
                Rural
                                                           Debit Card
3
                Urban
                       Female
                                                  1
                                                               PayPal
4
                         Male
                                                  4
                                                          Credit Card
            Suburban
5
                Urban Female
                                                  2
                                                               PayPal
6
            Suburban
                         Male
                                                  3
                                                           Debit Card
7
                                                  5
                Rural
                       Female
                                                               PayPal
8
                Urban
                         Male
                                                  1
                                                          Credit Card
9
            Suburban Female
                                                  3
                                                           Debit Card
   number_of_points order_item_categ
                                       order_id order_ref
                                                             shipping
                                                                         tax
0
                 200
                          Electronics
                                                1
                                                      OR123
                                                                  10.0
                                                                        5.00
1
                 150
                                                2
                                                      OR456
                                                                   7.0 3.50
                             Clothing
2
                 300
                                                3
                                                      OR789
                                                                  12.0 6.00
                          Electronics
3
                  50
                                                4
                                                                   8.0 4.00
                              Clothing
                                                      OR101
4
                                                5
                                                                  15.0 7.50
                 180
                          Electronics
                                                      OR202
5
                                                6
                                                                   6.0 3.00
                 120
                              Clothing
                                                      OR303
                                                7
                                                                   9.0 4.50
6
                 250
                          Electronics
                                                      OR404
7
                 450
                              Clothing
                                                8
                                                      OR505
                                                                  11.0 5.50
8
                  75
                          Electronics
                                                9
                                                      OR606
                                                                   7.5 3.75
9
                 200
                             Clothing
                                               10
                                                      OR707
                                                                  13.0 6.50
            order_id.1
                         quantity
                                        title
                                                unit_price description \
   item id
0
                                    Product A
                                                        25
                                                                 Item A
                      1
         2
                                    Product B
                                                                 Item B
1
                      1
                                                        15
2
                                                                 Item C
         3
                      2
                                    Product C
                                                        20
3
         4
                      2
                                 2 Product D
                                                        10
                                                                 Ttem D
4
         5
                      3
                                 3 Product E
                                                        30
                                                                 Item E
5
                                 1 Product F
                                                        40
                                                                 Item F
         6
                      3
         7
                      4
                                 2 Product G
                                                                 Item G
                                                        15
```

```
7
                 8
                              4
                                            Product H
                                                                 50
                                                                         Item H
       8
                 9
                              5
                                            Product I
                                                                 35
                                                                         Item I
       9
                              5
                                                                         Item J
                10
                                            Product J
                                                                 12
          shipping_addr_id
                              buyer_id.2
                                                    line1
                                                                   line2
                                                                                    city
                                             123 Main St
       0
                           1
                                        1
                                                                  Apt 4B
                                                                                New York
                           2
                                        2
                                              456 Elm Rd
                                                                Unit 202
                                                                            Los Angeles
       1
       2
                           3
                                        3
                                             789 Oak Ave
                                                                                 Chicago
                                                                 Suite 5
                           4
       3
                                        4
                                            101 Maple St
                                                                                 Houston
                                                                     NaN
       4
                           5
                                        5
                                             202 Pine Rd
                                                           Apartment 10
                                                                                   Miami
       5
                           6
                                        1
                                            303 Cedar St
                                                                     NaN
                                                                                 Seattle
       6
                           7
                                        2
                                            404 Birch Ln
                                                                 Unit 15
                                                                                  Boston
       7
                          8
                                        3
                                              505 Elm St
                                                                     NaN
                                                                                  Denver
                           9
       8
                                        4
                                              606 Dak Rd
                                                                     NaN
                                                                                 Atlanta
       9
                          10
                                        5
                                           707 Maple Ave
                                                                          San Francisco
                                                                     NaN
         state
                   zip
       0
            NY
                 10001
                 90001
       1
             CA
                 60601
       2
             IL
       3
            ΤX
                 77002
       4
            FI.
                 33101
       5
            WA
                 98101
       6
                  2201
            MA
       7
            CO
                 80201
       8
            GA
                 30301
                 94101
       9
            CA
[161]: os.chdir("C:\\Users\\ddaya\\OneDrive\\Documents\\R")
[162]: print(os.getcwd())
      C:\Users\ddaya\OneDrive\Documents\R
      stats=pd.read_csv("Paidy_Data.csv")
[164]:
       stats
[164]:
         api_key
                                       logo_url
                                                 closed
                                                                                  metadata
          abc123
                    https://example.com/logo1
                                                       0
                                                                                         {}
       0
          xyz789
                    https://example.com/logo2
                                                       1
                                                                     {\key\": \"value\"}"
       1
          mno456
                    https://example.com/logo3
                                                       0
                                                             {\key\": \"another_value\"}"
          pqr789
                    https://example.com/logo4
                                                          {\key\": \"different_value\"}"
       3
                                                       1
          1mn123
                    https://example.com/logo5
                                                       0
                                                                 {\key\": \"new_value\"}"
       5
          efg456
                    https://example.com/logo6
                                                       1
         hij789
                    https://example.com/logo7
                                                       0
       6
                                                             {\key\": \"unique_value\"}"
       7
          xyz123
                    https://example.com/logo8
                                                       1
       8 uvw456
                    https://example.com/logo9
                                                       0
                                                             {\key\": \"sample_value\"}"
```

	PAYLOAD_ID	лионит	CIIDDENCV	CTODE MAME	BUYER_ID	ORDER_1	ר ת.		
0	PAILUAD_ID 1	100.00	USD	STORE_NAME Store A	1 DOTER_1D				
1	2	200.50	EUR	Store B	2				
2	3	50.25	GBP		3				
3		300.75	USD	Store C Store D					
	4 5				4 5				
4		150.50	EUR	Store E					
5	6	75.00	GBP	Store F	6				
6	7	500.25 250.75	USD	Store G	7				
7	8		EUR	Store H					
8	9	120.00	GBP	Store I	9				
9	10	350.25	USD	Store J	10	11	.0		
	DESCRIPTION METADATA buyer_id Email name1 name2								\
0	First pay		Meta 1	-	uyer1@exam		John	Doe	`
1	Second pay		Meta 2		uyer2@exam	_	Jane	Smith	
2	Third pay		Meta 3		uyer3@exam	-	Michael		
3	Fourth pay		Meta 4		uyer4@exam	-	Emily		
4	Fifth pay		Meta 5		uyer5@exam	-	David		
5	Sixth pay		Meta 6		uyer6@exam	-	Sarah		
6	Seventh pay		leta 7		uyer7@exam	-	Robert	Miller	
7	Eighth pay		Meta 8		uyer7@exam uyer8@exam	-	Lisa		
8	Ninth pay		Meta 9		uyer0@exam uyer9@exam	-	William	Taylor	
9	Tenth pay		eta 10		yer10@exam	-	Olivia	Anderson	
9	renun pay.	Ioau ne	sta IV	10 bu	yer rowexam	bre.com	UIIVIA	Anderson	
	phone		dob buye	er_data_id	buyer_id.	1 user_i	.d age	\	
0	1234567890	5/15/1	•	1	•	1 12	_	`	
1	9876543210	10/22/1		2		2 45			
2	5551234567	3/10/1		3		3 78			
3	8889876543	12/1/1		4		4 10			
4	4445678901	7/8/1		5		5 20			
5	3332345678	9/25/1		6		1 30			
6	2223456789	11/12/1		7		2 40			
7	7774567890	6/18/1		8		3 50			
8	6663456789	4/30/1		9		4 60			
9	1112345678	2/5/2		10		5 70			
J	1112040070	2/0/2	2000	10		0 /(71 20		
	age_platform	account	reg date	e davs sin	ce_1st_tx	ltv or	der_cour	nt \	
0	Android		8/15/2015	•	120	500	_	10	
1	iOS		3/22/2018		60	800		15	
2	Android		12/5/2012		180	1000		20	
3	iOS		7/20/2020		30	300	•	5	
4	Android		4/18/2017		90	700	-	12	
5	iOS		10/10/2019		45	400	-	8	
6	Android		2/28/2016		150	900		18	
7	iOS		7/15/2013		300	1200		24	
'	100		, , 10, 2010	,	500	1200	4	<u></u>	

```
200
8
       Android
                        4/3/2021
                                                    15
                                                                         4
9
           iOS
                        9/9/2018
                                                    75
                                                         600
                                                                        14
   last_order_amt
                    last_order_at last_order_date
                                                      order_amt_last3m \
0
                50
                               NaN
                                          6/28/2023
                                                                    300
                75
                               NaN
                                                                    200
1
                                           7/8/2023
2
               100
                               NaN
                                          6/12/2023
                                                                    350
3
                30
                               NaN
                                           7/2/2023
                                                                    150
4
                80
                               NaN
                                          6/18/2023
                                                                    250
5
                40
                               NaN
                                           7/6/2023
                                                                    180
6
                90
                               NaN
                                          6/22/2023
                                                                    300
7
               120
                               NaN
                                          7/12/2023
                                                                    400
8
                20
                               NaN
                                          6/28/2023
                                                                    100
9
                70
                               NaN
                                           7/3/2023
                                                                    220
   order_count_last3m
                        additional_ship_ad
                                                billing_address
0
                        Shipping Address 1
                                              Billing Address 1
1
                        Shipping Address 2
                                              Billing Address 2
2
                        Shipping Address 3
                                              Billing Address 3
3
                        Shipping Address 4
                                              Billing Address 4
4
                                              Billing Address 5
                     6
                        Shipping Address 5
5
                        Shipping Address 1
                                             Billing Address 1
6
                     7
                        Shipping Address 2 Billing Address 2
7
                        Shipping Address 3
                                              Billing Address 3
                     8
8
                     2
                        Shipping Address 4
                                              Billing Address 4
9
                        Shipping Address 5 Billing Address 5
                       gender
                                subscription_count prev_payment_meth \
  delivery_locn_type
0
                Urban
                         Male
                                                   3
                                                           Credit Card
1
            Suburban
                       Female
                                                   5
                                                                PayPal
2
                Rural
                         Male
                                                   2
                                                            Debit Card
3
                       Female
                                                   1
                Urban
                                                                PayPal
4
             Suburban
                          Male
                                                   4
                                                           Credit Card
5
                       Female
                                                   2
                Urban
                                                                PayPal
6
             Suburban
                         Male
                                                   3
                                                            Debit Card
7
                Rural
                       Female
                                                   5
                                                                PayPal
8
                Urban
                         Male
                                                   1
                                                           Credit Card
            Suburban Female
9
                                                   3
                                                            Debit Card
   number_of_points order_item_categ
                                         order_id order_ref
                                                              shipping
                                                                          tax
0
                           Electronics
                                                1
                                                       OR123
                                                                   10.0
                                                                         5.00
                 200
                                                2
                                                                         3.50
1
                 150
                              Clothing
                                                       OR456
                                                                    7.0
2
                 300
                           Electronics
                                                3
                                                       OR789
                                                                   12.0
                                                                         6.00
3
                  50
                              Clothing
                                                4
                                                       OR101
                                                                    8.0
                                                                        4.00
4
                 180
                           Electronics
                                                5
                                                       OR202
                                                                   15.0 7.50
5
                 120
                                                                         3.00
                              Clothing
                                                6
                                                       OR303
                                                                    6.0
                                                7
6
                 250
                                                                    9.0 4.50
                           Electronics
                                                       OR404
```

```
7
                         450
                                      Clothing
                                                         8
                                                               OR505
                                                                            11.0 5.50
       8
                          75
                                   Electronics
                                                         9
                                                                            7.5 3.75
                                                               OR606
       9
                                                                            13.0 6.50
                         200
                                      Clothing
                                                        10
                                                               OR707
                    order_id.1
                                 quantity
                                                 title unit_price description
          item_id
                                            Product A
                                                                          Item A
       0
                 1
                              1
                                         2
                                                                  25
                 2
                                                                          Item B
       1
                              1
                                         3
                                            Product B
                                                                  15
       2
                 3
                              2
                                         1
                                            Product C
                                                                  20
                                                                          Item C
       3
                              2
                 4
                                         2 Product D
                                                                  10
                                                                          Item D
       4
                 5
                              3
                                         3 Product E
                                                                  30
                                                                          Item E
                                                                          Item F
       5
                 6
                              3
                                         1 Product F
                                                                  40
       6
                 7
                              4
                                         2 Product G
                                                                  15
                                                                          Item G
       7
                                         1 Product H
                                                                          Item H
                 8
                              4
                                                                  50
       8
                 9
                                         2 Product I
                              5
                                                                  35
                                                                          Item I
       9
                10
                              5
                                            Product J
                                                                  12
                                                                          Item J
          shipping_addr_id
                              buyer_id.2
                                                    line1
                                                                    line2
                                                                                     city \
       0
                                              123 Main St
                                                                   Apt 4B
                                                                                 New York
                                        1
                           2
       1
                                        2
                                               456 Elm Rd
                                                                 Unit 202
                                                                              Los Angeles
       2
                           3
                                              789 Oak Ave
                                        3
                                                                  Suite 5
                                                                                  Chicago
       3
                           4
                                        4
                                             101 Maple St
                                                                                  Houston
                                                                      NaN
       4
                           5
                                        5
                                              202 Pine Rd
                                                                                    Miami
                                                            Apartment 10
       5
                           6
                                        1
                                            303 Cedar St
                                                                      NaN
                                                                                  Seattle
       6
                           7
                                        2
                                             404 Birch Ln
                                                                  Unit 15
                                                                                   Boston
       7
                           8
                                        3
                                               505 Elm St
                                                                      NaN
                                                                                   Denver
       8
                           9
                                        4
                                               606 Oak Rd
                                                                      NaN
                                                                                  Atlanta
       9
                                           707 Maple Ave
                          10
                                                                      {\tt NaN}
                                                                           San Francisco
         state
                   zip
       0
                 10001
             NY
       1
             CA
                 90001
       2
             ΙL
                 60601
       3
             TX
                 77002
       4
             FL
                 33101
       5
             WA
                 98101
       6
             MA
                  2201
       7
             CO 80201
       8
             GA
                 30301
       9
             CA 94101
[165]: len(stats)
```

[165]: 10

[166]: stats.columns

```
[166]: Index(['api_key', 'logo_url', 'closed', 'metadata', 'PAYLOAD_ID', 'AMOUNT',
              'CURRENCY', 'STORE_NAME', 'BUYER_ID', 'ORDER_ID', 'DESCRIPTION',
              'METADATA', 'buyer_id', 'Email', 'name1', 'name2', 'phone', 'dob',
              'buyer_data_id', 'buyer_id.1', 'user_id', 'age', 'age_platform',
              'account_reg_date', 'days_since_1st_tx', 'ltv', 'order_count',
              'last_order_amt', 'last_order_at', 'last_order_date',
              'order amt last3m', 'order count last3m', 'additional ship ad',
              'billing_address', 'delivery_locn_type', 'gender', 'subscription_count',
              'prev_payment_meth', 'number_of_points', 'order_item_categ', 'order_id',
              'order_ref', 'shipping', 'tax', 'item_id', 'order_id.1', 'quantity',
              'title', 'unit_price', 'description', 'shipping_addr_id', 'buyer_id.2',
              'line1', 'line2', 'city', 'state', 'zip'],
             dtype='object')
[167]: len(stats.columns)
[167]: 57
[168]: stats.tail()
[168]:
         api_key
                                     logo_url
                                              closed
                                                                           metadata \
                                                          {\key\": \"new_value\"}"
                   https://example.com/logo6
       5 efg456
                                                    1
       6 hij789
                   https://example.com/logo7
                                                    0
       7 xyz123
                   https://example.com/logo8
                                                    1
                                                       {\key\": \"unique value\"}"
                   https://example.com/logo9
                                                       {\key\": \"sample_value\"}"
       8 uvw456
                                                    0
       9 rst789 https://example.com/logo10
                                                                                 {}
          PAYLOAD ID
                      AMOUNT CURRENCY STORE_NAME
                                                   BUYER ID
                                                             ORDER ID
       5
                                          Store F
                                                                   106
                       75.00
                                  GBP
                                                          6
                                                          7
       6
                   7 500.25
                                  USD
                                          Store G
                                                                   107
       7
                      250.75
                                  F.UR.
                                          Store H
                                                                   108
                   8
                                                          8
       8
                   9
                     120.00
                                  GBP
                                          Store I
                                                          9
                                                                   109
                      350.25
       9
                                  USD
                                          Store J
                                                         10
                                                                   110
                  10
              DESCRIPTION METADATA buyer id
                                                             Email
                                                                       name1
                                                                                 name2 \
       5
            Sixth payload
                            Meta 6
                                                buyer6@example.com
                                                                       Sarah
                                                                                 Jones
          Seventh payload
                            Meta 7
                                            7
                                                buyer7@example.com
                                                                      Robert
                                                                                Miller
       7
           Eighth payload
                            Meta 8
                                            8
                                                buyer8@example.com
                                                                        Lisa
                                                                                 Davis
                                                buyer9@example.com
                                                                    William
       8
            Ninth payload
                            Meta 9
                                            9
                                                                                Taylor
                                                                     Olivia Anderson
       9
            Tenth payload Meta 10
                                           10 buyer10@example.com
                                  buyer_data_id buyer_id.1
                                                              user id
                                                                        age
               phone
                             dob
                                                                   303
          3332345678
                       9/25/1998
                                               6
                                                                         26
       5
                                               7
                                                           2
       6 2223456789
                      11/12/1972
                                                                   404
                                                                         29
       7 7774567890
                       6/18/1989
                                               8
                                                           3
                                                                   505
                                                                         56
                       4/30/1993
       8 6663456789
                                               9
                                                           4
                                                                   606
                                                                         33
       9 1112345678
                        2/5/2000
                                              10
                                                           5
                                                                   707
                                                                         28
```

```
age_platform account_reg_date
                                   days_since_1st_tx
                                                              order count
                                                        ltv
5
           iOS
                      10/10/2019
                                                   45
                                                        400
                                                                        8
       Android
                                                  150
                                                        900
                                                                        18
6
                       2/28/2016
7
           iOS
                       7/15/2013
                                                  300
                                                       1200
                                                                        24
                                                        200
8
       Android
                        4/3/2021
                                                   15
                                                                         4
9
           iOS
                        9/9/2018
                                                   75
                                                        600
                                                                        14
                    last_order_at last_order_date
                                                     order amt last3m \
   last_order_amt
5
                               NaN
                                          7/6/2023
                                                                   180
                40
6
                90
                               NaN
                                         6/22/2023
                                                                   300
7
               120
                               NaN
                                         7/12/2023
                                                                   400
8
                20
                               NaN
                                         6/28/2023
                                                                   100
9
                70
                               NaN
                                          7/3/2023
                                                                   220
   order_count_last3m
                        additional_ship_ad
                                                billing_address
                                             Billing Address 1
5
                        Shipping Address 1
6
                        Shipping Address 2
                                             Billing Address 2
7
                        Shipping Address 3 Billing Address 3
8
                        Shipping Address 4 Billing Address 4
9
                        Shipping Address 5 Billing Address 5
                               subscription_count prev_payment_meth \
  delivery_locn_type
                       gender
                Urban
                       Female
                                                  2
                                                                PayPal
5
6
            Suburban
                         Male
                                                  3
                                                            Debit Card
7
                Rural Female
                                                  5
                                                                PayPal
                                                          Credit Card
8
                Urban
                         Male
                                                  1
9
            Suburban Female
                                                  3
                                                           Debit Card
   number_of_points order_item_categ
                                        order_id order_ref
                                                              shipping
                                                                         tax
5
                 120
                              Clothing
                                                6
                                                      OR303
                                                                   6.0
                                                                        3.00
                 250
                                                7
6
                                                                   9.0 4.50
                          Electronics
                                                      OR404
7
                                                                  11.0 5.50
                 450
                              Clothing
                                                8
                                                      OR505
                  75
                                                9
                                                                   7.5 3.75
8
                          Electronics
                                                      OR606
                                                                  13.0 6.50
9
                 200
                              Clothing
                                               10
                                                      OR707
                                                unit_price description
   item_id
            order_id.1
                         quantity
                                        title
5
         6
                      3
                                    Product F
                                                        40
                                                                 Item F
                                 1
6
         7
                                                                 Item G
                      4
                                 2 Product G
                                                        15
7
         8
                      4
                                 1
                                    Product H
                                                        50
                                                                 Item H
8
         9
                      5
                                 2 Product I
                                                        35
                                                                 Item I
9
                                    Product J
                                                                 Item J
        10
                      5
                                                        12
   shipping_addr_id
                      buyer_id.2
                                            line1
                                                     line2
                                                                      city state
5
                                    303 Cedar St
                                                       NaN
                                                                   Seattle
                   6
                                1
                                                                               WA
                   7
                                2
                                    404 Birch Ln
                                                   Unit 15
                                                                    Boston
6
                                                                               MA
7
                   8
                                3
                                      505 Elm St
                                                       NaN
                                                                    Denver
                                                                               CO
```

```
9
                                            707 Maple Ave
                          10
                                        5
                                                                      San Francisco
                                                                                         CA
                                                                 NaN
             zip
       5
          98101
            2201
       6
       7
          80201
       8
          30301
          94101
       9
[169]:
       stats.head(6)
[169]:
         api_key
                                      logo_url
                                                 closed
                                                                                  metadata \
          abc123
                   https://example.com/logo1
                                                       0
                                                                                         {}
                   https://example.com/logo2
                                                       1
                                                                     {\key\": \"value\"}"
       1
          xyz789
          mno456
                   https://example.com/logo3
                                                       0
                                                            {\key\": \"another value\"}"
       2
                                                       1
                                                          {\key\": \"different_value\"}"
          pqr789
                   https://example.com/logo4
                                                       0
          lmn123
                   https://example.com/logo5
          efg456
                   https://example.com/logo6
                                                       1
                                                                 {\key\": \"new_value\"}"
          PAYLOAD_ID
                        AMOUNT CURRENCY STORE_NAME
                                                       BUYER_ID
                                                                  ORDER_ID
                                                                                DESCRIPTION
       0
                     1
                        100.00
                                     USD
                                             Store A
                                                              1
                                                                       101
                                                                              First payload
                     2
                        200.50
                                                              2
       1
                                     EUR
                                             Store B
                                                                       102
                                                                             Second payload
       2
                     3
                         50.25
                                     GBP
                                             Store C
                                                              3
                                                                       103
                                                                              Third payload
       3
                     4
                        300.75
                                                              4
                                     USD
                                             Store D
                                                                       104
                                                                             Fourth payload
       4
                    5
                        150.50
                                     EUR
                                             Store E
                                                              5
                                                                       105
                                                                              Fifth payload
       5
                     6
                         75.00
                                     GBP
                                             Store F
                                                              6
                                                                       106
                                                                              Sixth payload
         METADATA
                                              Email
                                                        name1
                    buyer_id
                                                                   name2
                                                                                phone
            Meta 1
                                                                           1234567890
       0
                            1
                                buyer1@example.com
                                                         John
                                                                     Doe
            Meta 2
       1
                            2
                               buyer2@example.com
                                                                   Smith
                                                                          9876543210
                                                         Jane
       2
           Meta 3
                               buyer3@example.com
                                                     Michael
                                                                 Johnson
                                                                           5551234567
       3
            Meta 4
                                buyer4@example.com
                                                        Emily
                                                               Williams
                                                                           8889876543
       4
            Meta 5
                                buyer5@example.com
                                                        David
                                                                           4445678901
                                                                   Brown
       5
            Meta 6
                               buyer6@example.com
                                                        Sarah
                                                                   Jones
                                                                          3332345678
                        buyer_data_id
                                        buyer_id.1
                                                      user_id
                                                               age age_platform
                  dob
       0
            5/15/1990
                                                  1
                                                          123
                                                                 31
                                                                         Android
                                     1
           10/22/1985
                                     2
                                                  2
                                                          456
       1
                                                                 38
                                                                              iOS
                                                  3
       2
                                     3
                                                          789
            3/10/1978
                                                                 45
                                                                         Android
       3
            12/1/1995
                                     4
                                                  4
                                                          101
                                                                 29
                                                                              iOS
       4
             7/8/1982
                                     5
                                                  5
                                                          202
                                                                         Android
                                                                 41
       5
            9/25/1998
                                     6
                                                  1
                                                          303
                                                                 26
                                                                              iOS
          account_reg_date
                             days_since_1st_tx
                                                   ltv
                                                         order_count
                                                                       last_order_amt
       0
                 8/15/2015
                                             120
                                                   500
                                                                   10
                                                                                    50
       1
                 3/22/2018
                                                   800
                                              60
                                                                                    75
                                                                   15
```

606 Oak Rd

NaN

Atlanta

GA

8

```
2
                                   180 1000
                                                                        100
         12/5/2012
                                                         20
3
         7/20/2020
                                    30
                                         300
                                                         5
                                                                         30
                                         700
4
         4/18/2017
                                    90
                                                         12
                                                                         80
5
                                    45
                                          400
                                                                         40
        10/10/2019
                                                         8
   last_order_at last_order_date order_amt_last3m order_count_last3m
0
             NaN
                        6/28/2023
                                                 300
             NaN
                                                 200
                                                                        4
1
                         7/8/2023
2
                                                 350
                                                                        7
             NaN
                        6/12/2023
3
             NaN
                         7/2/2023
                                                 150
                                                                        3
4
             NaN
                        6/18/2023
                                                 250
                                                                        6
5
             NaN
                         7/6/2023
                                                 180
                                                                        4
   additional_ship_ad
                          billing_address delivery_locn_type
                                                                gender
                                                        Urban
                                                                  Male
  Shipping Address 1 Billing Address 1
                                                     Suburban Female
  Shipping Address 2
                        Billing Address 2
                                                                  Male
2 Shipping Address 3 Billing Address 3
                                                        Rural
3 Shipping Address 4 Billing Address 4
                                                        Urban Female
                                                                  Male
4 Shipping Address 5 Billing Address 5
                                                     Suburban
5 Shipping Address 1 Billing Address 1
                                                        Urban Female
   subscription_count prev_payment_meth number_of_points order_item_categ \
0
                     3
                             Credit Card
                                                        200
                                                                  Electronics
1
                    5
                                  PayPal
                                                         150
                                                                     Clothing
2
                     2
                              Debit Card
                                                        300
                                                                  Electronics
3
                     1
                                  PayPal
                                                         50
                                                                     Clothing
4
                             Credit Card
                                                         180
                                                                  Electronics
5
                     2
                                  PayPal
                                                        120
                                                                     Clothing
                                                              quantity
   order_id order_ref
                                                 order_id.1
                        shipping tax
                                       item_id
0
                OR123
                            10.0
                                  5.0
                                              1
                                                           1
                                                                     2
          1
          2
                                              2
                                                                     3
                OR456
                             7.0
                                                           1
1
                                  3.5
          3
                                              3
                                                           2
                                                                     1
2
                OR789
                            12.0
                                  6.0
                                                           2
                                                                     2
3
          4
                                              4
                OR101
                             8.0 4.0
                                                           3
                                                                     3
4
          5
                OR202
                            15.0
                                  7.5
                                              5
5
          6
                OR303
                             6.0
                                  3.0
                                                           3
                                                                     1
              unit_price description
                                       shipping_addr_id buyer_id.2
       title
  Product A
                       25
                               Item A
                                                       1
                                                                    1
1 Product B
                       15
                               Item B
                                                       2
                                                                    2
2 Product C
                       20
                               Item C
                                                       3
                                                                    3
3 Product D
                               Item D
                                                       4
                                                                    4
                       10
4 Product E
                       30
                               Item E
                                                       5
                                                                    5
5 Product F
                       40
                               Item F
                                                       6
                                                                    1
          line1
                         line2
                                        city state
                                                      zip
    123 Main St
                        Apt 4B
                                   New York
                                                NY
                                                    10001
```

```
Unit 202
                                                              90001
       1
             456 Elm Rd
                                         Los Angeles
                                                          CA
       2
           789 Oak Ave
                                                              60601
                               Suite 5
                                             Chicago
                                                          IL
       3
          101 Maple St
                                    NaN
                                             Houston
                                                          TX
                                                              77002
           202 Pine Rd
                                                              33101
       4
                          Apartment 10
                                                Miami
                                                          FL
          303 Cedar St
                                    NaN
                                             Seattle
                                                          WA
                                                              98101
[170]: stats.tail(6)
[170]:
         api_key
                                       logo_url
                                                  closed
                                                                               metadata
          lmn123
                    https://example.com/logo5
                                                       0
          efg456
                    https://example.com/logo6
                                                       1
                                                              {\key\": \"new_value\"}"
          hij789
                    https://example.com/logo7
                                                       0
       6
       7
          xyz123
                    https://example.com/logo8
                                                       1
                                                           {\key\": \"unique_value\"}"
                    https://example.com/logo9
          uvw456
                                                       0
                                                           {\key\": \"sample_value\"}"
          rst789
                   https://example.com/logo10
                                                       1
                                                                                      {}
                       AMOUNT CURRENCY STORE_NAME
                                                                 ORDER ID
          PAYLOAD ID
                                                      BUYER ID
                    5
                        150.50
                                            Store E
                                                              5
       4
                                     EUR
                                                                       105
       5
                    6
                        75.00
                                     GBP
                                            Store F
                                                              6
                                                                       106
       6
                       500.25
                                     USD
                                                              7
                                                                       107
                                            Store G
       7
                    8
                       250.75
                                     EUR.
                                            Store H
                                                              8
                                                                       108
       8
                    9
                       120.00
                                     GBP
                                            Store I
                                                              9
                                                                       109
       9
                       350.25
                                     USD
                   10
                                            Store J
                                                             10
                                                                       110
               DESCRIPTION METADATA
                                       buyer id
                                                                 Email
                                                                           name1
                                                                                      name2
       4
            Fifth payload
                              Meta 5
                                               5
                                                   buyer5@example.com
                                                                           David
                                                                                      Brown
       5
             Sixth payload
                              Meta 6
                                               6
                                                   buyer6@example.com
                                                                           Sarah
                                                                                      Jones
       6
          Seventh payload
                              Meta 7
                                               7
                                                   buyer7@example.com
                                                                          Robert
                                                                                     Miller
       7
           Eighth payload
                              Meta 8
                                               8
                                                   buyer8@example.com
                                                                            Lisa
                                                                                      Davis
                              Meta 9
             Ninth payload
                                               9
                                                   buyer9@example.com
       8
                                                                         William
                                                                                     Taylor
                                                  buyer10@example.com
       9
             Tenth payload
                             Meta 10
                                                                          Olivia
                                                                                  Anderson
                                             10
                phone
                                     buyer_data_id buyer_id.1
                                                                  user_id
                                                                            age
          4445678901
                          7/8/1982
                                                  5
                                                               5
                                                                       202
                                                                             41
          3332345678
                         9/25/1998
                                                  6
                                                               1
                                                                       303
                                                                             26
       5
                                                  7
                                                               2
       6
          2223456789
                       11/12/1972
                                                                       404
                                                                             29
       7
          7774567890
                         6/18/1989
                                                  8
                                                               3
                                                                       505
                                                                             56
                                                  9
                                                               4
       8
          6663456789
                         4/30/1993
                                                                       606
                                                                             33
          1112345678
                          2/5/2000
                                                 10
                                                               5
                                                                       707
                                                                             28
         age_platform account_reg_date
                                           days_since_1st_tx
                                                                 ltv
                                                                       order_count
       4
               Android
                               4/18/2017
                                                                 700
                                                            90
                                                                                 12
                                                                 400
       5
                   iOS
                              10/10/2019
                                                            45
                                                                                 8
       6
               Android
                               2/28/2016
                                                           150
                                                                 900
                                                                                 18
       7
                   iOS
                               7/15/2013
                                                           300
                                                                1200
                                                                                 24
       8
               Android
                                4/3/2021
                                                            15
                                                                 200
                                                                                  4
       9
                   iOS
                                9/9/2018
                                                            75
                                                                 600
                                                                                 14
```

```
last_order_at last_order_date
                                                     order amt last3m \
   last_order_amt
4
                80
                               NaN
                                          6/18/2023
                                                                    250
5
                40
                               NaN
                                                                    180
                                           7/6/2023
6
                90
                               NaN
                                          6/22/2023
                                                                    300
7
               120
                               NaN
                                          7/12/2023
                                                                    400
                20
                               NaN
                                          6/28/2023
                                                                    100
8
9
                70
                               NaN
                                           7/3/2023
                                                                    220
                        additional_ship_ad
                                                billing_address
   order_count_last3m
4
                        Shipping Address 5
                                              Billing Address 5
5
                        Shipping Address 1
                                             Billing Address 1
6
                        Shipping Address 2 Billing Address 2
7
                        Shipping Address 3
                                              Billing Address 3
8
                                             Billing Address 4
                        Shipping Address 4
9
                        Shipping Address 5
                                              Billing Address 5
                       gender
                                subscription_count prev_payment_meth
  delivery_locn_type
             Suburban
                         Male
4
                                                           Credit Card
                                                  2
5
                Urban
                       Female
                                                                PayPal
6
                         Male
                                                   3
                                                            Debit Card
             Suburban
7
                       Female
                                                  5
                                                                PayPal
                Rural
8
                Urban
                         Male
                                                   1
                                                           Credit Card
9
             Suburban Female
                                                            Debit Card
                                                   3
   number_of_points order_item_categ
                                        order_id order_ref
                                                              shipping
                          Electronics
                                                       OR202
                                                                         7.50
4
                 180
                                                5
                                                                   15.0
5
                 120
                              Clothing
                                                6
                                                       DR303
                                                                    6.0 3.00
                                                7
                                                                        4.50
6
                 250
                          Electronics
                                                       OR404
                                                                   9.0
7
                 450
                                                8
                                                                   11.0 5.50
                              Clothing
                                                       OR505
8
                  75
                          Electronics
                                                9
                                                                   7.5 3.75
                                                       OR606
9
                                                                   13.0 6.50
                 200
                              Clothing
                                               10
                                                       OR707
                         quantity
   item_id
            order_id.1
                                         title
                                                unit_price description
4
         5
                      3
                                    Product E
                                                         30
                                                                  Item E
5
         6
                      3
                                 1
                                    Product F
                                                         40
                                                                  Item F
         7
6
                      4
                                 2
                                    Product G
                                                                  Ttem G
                                                         15
7
         8
                      4
                                 1
                                    Product H
                                                         50
                                                                  Item H
8
         9
                      5
                                    Product I
                                                         35
                                                                  Item I
9
        10
                      5
                                 4 Product J
                                                         12
                                                                  Item J
   shipping_addr_id
                      buyer_id.2
                                            line1
                                                           line2
                                                                            city \
4
                   5
                                5
                                     202 Pine Rd
                                                   Apartment 10
                                                                           Miami
5
                   6
                                1
                                    303 Cedar St
                                                             NaN
                                                                         Seattle
                   7
6
                                2
                                    404 Birch Ln
                                                         Unit 15
                                                                          Boston
7
                                      505 Elm St
                   8
                                3
                                                                          Denver
                                                             NaN
8
                   9
                                4
                                      606 Oak Rd
                                                             NaN
                                                                         Atlanta
```

```
9 10 5 707 Maple Ave NaN San Francisco
```

```
state zip
4 FL 33101
5 WA 98101
6 MA 2201
7 CO 80201
8 GA 30301
9 CA 94101
```

[171]: stats.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9

Data columns (total 57 columns):

#	Column	Non-Null Count	Dtype
0	api_key	10 non-null	object
1	logo_url	10 non-null	object
2	closed	10 non-null	int64
3	metadata	10 non-null	object
4	PAYLOAD_ID	10 non-null	int64
5	AMOUNT	10 non-null	float64
6	CURRENCY	10 non-null	object
7	STORE_NAME	10 non-null	object
8	BUYER_ID	10 non-null	int64
9	ORDER_ID	10 non-null	int64
10	DESCRIPTION	10 non-null	object
11	METADATA	10 non-null	object
12	buyer_id	10 non-null	int64
13	Email	10 non-null	object
14	name1	10 non-null	object
15	name2	10 non-null	object
16	phone	10 non-null	int64
17	dob	10 non-null	object
18	buyer_data_id	10 non-null	int64
19	buyer_id.1	10 non-null	int64
20	user_id	10 non-null	int64
21	age	10 non-null	int64
22	age_platform	10 non-null	object
23	account_reg_date	10 non-null	object
24	days_since_1st_tx	10 non-null	int64
25	ltv	10 non-null	int64
26	order_count	10 non-null	int64
27	last_order_amt	10 non-null	int64
28	last_order_at	0 non-null	float64
29	last_order_date	10 non-null	object
30	order_amt_last3m	10 non-null	int64

```
order_count_last3m
                         10 non-null
                                           int64
31
32
    additional_ship_ad
                         10 non-null
                                           object
33
    billing_address
                          10 non-null
                                           object
34
    delivery_locn_type
                         10 non-null
                                           object
35
    gender
                          10 non-null
                                           object
36
    subscription_count
                                           int64
                         10 non-null
37
    prev payment meth
                          10 non-null
                                           object
38
    number_of_points
                          10 non-null
                                           int64
    order_item_categ
39
                          10 non-null
                                           object
40
    order_id
                          10 non-null
                                           int64
41
    order_ref
                          10 non-null
                                           object
42
    shipping
                          10 non-null
                                           float64
43
                          10 non-null
                                           float64
    tax
44
    item_id
                          10 non-null
                                           int64
45
    order_id.1
                          10 non-null
                                           int64
46
                         10 non-null
    quantity
                                           int64
47
    title
                          10 non-null
                                           object
48
    unit_price
                          10 non-null
                                           int64
49
    description
                          10 non-null
                                           object
50
    shipping addr id
                          10 non-null
                                           int64
51
    buyer id.2
                          10 non-null
                                           int64
52
    line1
                          10 non-null
                                           object
53
    line2
                         5 non-null
                                           object
54
    city
                          10 non-null
                                           object
55
    state
                         10 non-null
                                           object
56
    zip
                          10 non-null
                                           int64
```

dtypes: float64(4), int64(26), object(27)

memory usage: 4.6+ KB

[172]: stats.describe()

```
[172]:
                          PAYLOAD_ID
                                                    BUYER ID
                                                                ORDER_ID
                                                                           buyer_id
                  closed
                                            AMOUNT
                             10.00000
                                                    10.00000
                                                                10.00000
                                                                           10.00000
       count
              10.000000
                                        10.000000
       mean
               0.500000
                              5.50000
                                       209.825000
                                                     5.50000
                                                               105.50000
                                                                            5.50000
       std
                                                                 3.02765
               0.527046
                              3.02765
                                       141.964982
                                                     3.02765
                                                                            3.02765
       min
               0.000000
                              1.00000
                                        50.250000
                                                     1.00000
                                                               101.00000
                                                                            1.00000
       25%
               0.000000
                              3.25000
                                       105.000000
                                                     3.25000
                                                               103.25000
                                                                            3.25000
       50%
                                       175.500000
                                                               105.50000
               0.500000
                              5.50000
                                                     5.50000
                                                                            5.50000
       75%
                1.000000
                              7.75000
                                       288.250000
                                                     7.75000
                                                               107.75000
                                                                            7.75000
                1.000000
                             10.00000
                                       500.250000
                                                    10.00000
                                                               110.00000
                                                                           10.00000
       max
                              buyer_data_id
                                              buyer_id.1
                      phone
                                                              user_id
                                                                              age
                                   10.00000
                                               10.000000
               1.000000e+01
                                                            10.000000
                                                                       10.000000
       count
       mean
               5.110407e+09
                                    5.50000
                                                3.000000
                                                           419.600000
                                                                       35.600000
       std
                                    3.02765
                                                1.490712
                                                           238.766367
               3.156104e+09
                                                                         9.453982
       min
               1.112346e+09
                                    1.00000
                                                1.000000
                                                           101.000000
                                                                        26.000000
       25%
               2.500679e+09
                                    3.25000
                                                2.000000
                                                           227.250000
                                                                       29.000000
```

```
50%
       4.998457e+09
                             5.50000
                                         3.000000
                                                    430.000000
                                                                 32.000000
75%
       7.496790e+09
                             7.75000
                                         4.000000
                                                    580.750000
                                                                 40.250000
max
       9.876543e+09
                            10.00000
                                         5.000000
                                                    789.000000
                                                                 56.000000
                                     ltv
       days_since_1st_tx
                                          order_count
                                                        last_order_amt
                10.000000
                              10.000000
                                            10.000000
                                                              10.000000
count
               106.500000
                             660.000000
                                            13.000000
                                                             67.500000
mean
std
                85.863263
                             320.416396
                                             6.497863
                                                             32.080628
min
                15.000000
                             200.000000
                                             4.000000
                                                             20.000000
25%
                48.750000
                             425.000000
                                             8.500000
                                                             42.500000
50%
                82.500000
                             650.000000
                                            13.000000
                                                             72.500000
75%
               142.500000
                             875.000000
                                            17.250000
                                                             87.500000
max
               300.000000
                            1200.000000
                                            24.000000
                                                            120.000000
       last_order_at
                       order_amt_last3m
                                           order_count_last3m
count
                  0.0
                               10.000000
                                                     10.000000
                  NaN
                              245.000000
                                                      5.100000
mean
std
                  NaN
                               93.124767
                                                      1.911951
min
                  NaN
                              100.000000
                                                      2.000000
25%
                  NaN
                                                      4.000000
                              185.000000
50%
                  NaN
                              235.000000
                                                      5.000000
75%
                              300.000000
                                                      6.750000
                  NaN
                  NaN
                              400.000000
                                                      8.000000
max
                                                order id
                                                                                   \
       subscription_count
                             number_of_points
                                                            shipping
                                                                              tax
count
                 10.000000
                                     10.000000
                                                 10.00000
                                                           10.000000
                                                                       10.000000
                  2.900000
mean
                                   197.500000
                                                  5.50000
                                                            9.850000
                                                                        4.925000
                                                  3.02765
                                                            2.887232
std
                  1.449138
                                   116.601172
                                                                        1.443616
min
                  1.000000
                                     50.000000
                                                  1.00000
                                                            6.000000
                                                                        3.000000
25%
                                    127.500000
                                                  3.25000
                                                            7.625000
                  2.000000
                                                                        3.812500
50%
                                    190.000000
                                                            9.500000
                  3.000000
                                                  5.50000
                                                                        4.750000
75%
                  3.750000
                                   237.500000
                                                  7.75000
                                                           11.750000
                                                                        5.875000
                                                           15.000000
max
                  5.000000
                                   450.000000
                                                 10.00000
                                                                        7.500000
        item_id
                  order_id.1
                                quantity
                                           unit_price
                                                        shipping_addr_id
       10.00000
                   10.000000
                               10.000000
                                             10.00000
                                                                 10.00000
count
                                2.100000
        5.50000
                    3.000000
                                             25.20000
                                                                  5.50000
mean
        3.02765
                    1.490712
                                0.994429
                                             13.30664
std
                                                                  3.02765
min
        1.00000
                    1.000000
                                1.000000
                                             10.00000
                                                                  1.00000
25%
        3.25000
                    2.000000
                                1.250000
                                             15.00000
                                                                  3.25000
50%
        5.50000
                    3.000000
                                2.000000
                                             22.50000
                                                                  5.50000
75%
        7.75000
                    4.000000
                                2.750000
                                             33.75000
                                                                  7.75000
       10.00000
                    5.000000
                                4.000000
                                             50.00000
                                                                 10.00000
max
       buyer_id.2
                              zip
        10.000000
                        10.000000
count
mean
         3.000000
                    57561.100000
```

```
      std
      1.490712
      35899.339023

      min
      1.000000
      2201.000000

      25%
      2.000000
      31001.000000

      50%
      3.000000
      68801.500000

      75%
      4.000000
      87551.000000

      max
      5.000000
      98101.0000000
```

[173]: stats.describe().transpose()

[173]:		count		mean		std		min	\	
closed PAYLOAD_ID AMOUNT BUYER_ID ORDER_ID buyer_id		10.0	5.0000	00e-01	5.27046	63e-01	0.000	000e+00		
		10.0	5.5000	00e+00	3.0276	50e+00	1.0000	000e+00		
		10.0	2.0982	250e+02 1.419		50e+02 5.0250		000e+01		
		10.0	5.500000e+00		3.0276	50e+00	1.0000	.000000e+00		
		10.0	1.0550	00e+02	3.0276	50e+00	1.0100	000e+02		
		10.0	5.5000	00e+00	3.0276	50e+00	1.0000	000e+00		
pl	hone	10.0	5.1104	07e+09	3.15610	04e+09	1.112	346e+09		
bı	uyer_data_id	10.0	5.5000	00e+00	3.0276	50e+00	1.0000	000e+00		
bı	uyer_id.1	10.0	3.0000	00e+00	1.4907	12e+00	1.0000	000e+00		
u	ser_id	10.0	4.1960	00e+02	2.3876	64e+02	1.010	000e+02		
aį	ge	10.0	3.5600	00e+01	9.45398	32e+00	2.6000	000e+01		
da	ays_since_1st_tx	10.0	1.0650	00e+02	8.58632	26e+01	1.5000	000e+01		
11	tv	10.0	6.6000	00e+02	3.20416	64e+02	2.0000	000e+02		
01	rder_count	10.0	1.3000	00e+01	6.49786	63e+00	4.0000	000e+00		
18	ast_order_amt	10.0	6.7500	00e+01	3.2080	63e+01	2.0000	000e+01		
18	ast_order_at	0.0		NaN		NaN		NaN		
01	rder_amt_last3m	10.0	2.4500	00e+02	9.3124	77e+01	1.0000	000e+02		
01	rder_count_last3m	10.0	5.1000	00e+00	1.9119	51e+00	2.0000	000e+00		
នា	ubscription_count	10.0	2.9000	00e+00	1.44913	38e+00	1.0000	000e+00		
nı	umber_of_points	10.0	1.9750	00e+02	1.1660	12e+02	5.0000	000e+01		
01	rder_id	10.0	5.5000	00e+00	3.0276	50e+00	1.0000	000e+00		
sl	hipping	10.0	9.8500	00e+00	2.88723	32e+00	6.0000	000e+00		
ta	ax	10.0	4.9250	00e+00	1.4436	16e+00	3.0000	000e+00		
i	tem_id	10.0	5.5000	00e+00	3.0276	50e+00	1.0000	000e+00		
01	rder_id.1	10.0	3.0000	00e+00	1.4907	12e+00	1.0000	000e+00		
quantity unit_price shipping_addr_id		10.0	2.1000	00e+00	9.94428	39e-01	1.0000	000e+00		
		10.0	2.5200	00e+01	1.3306	64e+01	1.0000	000e+01		
		10.0	5.5000	00e+00	3.0276	50e+00	1.0000	000e+00		
bı	uyer_id.2	10.0	3.0000		1.4907		1.0000	000e+00		
zip		10.0	5.7561	10e+04	3.58993	34e+04	2.2010	000e+03		
			25%		50%		75%		max	
	losed	0.000000e+00		5.0000		1.0000			00e+00	
PAYLOAD_ID AMOUNT		3.2500		5.5000		7.7500			00e+01	
				1.755000e+02 2.8825				00e+02		
	UYER_ID	3.2500		5.5000		7.7500			00e+01	
ORDER_ID		1.0325	00e+02	1.0550	00e+02	1.0775	00e+02	1.1000	00e+02	

```
user_id
                          2.272500e+02 4.300000e+02 5.807500e+02 7.890000e+02
                          2.900000e+01
                                       3.200000e+01
                                                      4.025000e+01 5.600000e+01
      age
                          4.875000e+01 8.250000e+01
                                                      1.425000e+02 3.000000e+02
      days_since_1st_tx
      ltv
                          4.250000e+02
                                        6.500000e+02
                                                      8.750000e+02 1.200000e+03
      order count
                          8.500000e+00
                                        1.300000e+01
                                                      1.725000e+01
                                                                    2.400000e+01
      last order amt
                          4.250000e+01
                                        7.250000e+01
                                                      8.750000e+01 1.200000e+02
      last order at
                                   NaN
                                                 NaN
                                                               NaN
                                                                             NaN
      order amt last3m
                          1.850000e+02 2.350000e+02
                                                      3.000000e+02 4.000000e+02
      order count last3m
                          4.000000e+00
                                        5.000000e+00
                                                      6.750000e+00
                                                                    8.000000e+00
      subscription_count
                          2.000000e+00
                                        3.000000e+00
                                                      3.750000e+00
                                                                    5.000000e+00
                                        1.900000e+02
                                                      2.375000e+02
                                                                    4.500000e+02
      number_of_points
                          1.275000e+02
      order_id
                          3.250000e+00 5.500000e+00
                                                      7.750000e+00
                                                                    1.000000e+01
                                                      1.175000e+01 1.500000e+01
      shipping
                          7.625000e+00 9.500000e+00
                          3.812500e+00 4.750000e+00
                                                      5.875000e+00
                                                                    7.500000e+00
      tax
      item_id
                          3.250000e+00 5.500000e+00
                                                      7.750000e+00
                                                                   1.000000e+01
      order_id.1
                          2.000000e+00
                                        3.000000e+00
                                                      4.000000e+00
                                                                    5.000000e+00
      quantity
                          1.250000e+00 2.000000e+00
                                                      2.750000e+00 4.000000e+00
      unit_price
                          1.500000e+01 2.250000e+01
                                                      3.375000e+01
                                                                    5.000000e+01
      shipping_addr_id
                          3.250000e+00 5.500000e+00
                                                      7.750000e+00 1.000000e+01
      buyer id.2
                          2.000000e+00
                                        3.000000e+00
                                                      4.000000e+00 5.000000e+00
                          3.100100e+04 6.880150e+04
                                                      8.755100e+04 9.810100e+04
      zip
[174]:
      stats.columns
[174]: Index(['api_key', 'logo_url', 'closed', 'metadata', 'PAYLOAD_ID', 'AMOUNT',
              'CURRENCY', 'STORE_NAME', 'BUYER_ID', 'ORDER_ID', 'DESCRIPTION',
              'METADATA', 'buyer id', 'Email', 'name1', 'name2', 'phone', 'dob',
              'buyer data id', 'buyer id.1', 'user id', 'age', 'age platform',
              'account_reg_date', 'days_since_1st_tx', 'ltv', 'order_count',
              'last_order_amt', 'last_order_at', 'last_order_date',
              'order_amt_last3m', 'order_count_last3m', 'additional_ship_ad',
              'billing_address', 'delivery_locn_type', 'gender', 'subscription_count',
              'prev_payment_meth', 'number_of_points', 'order_item_categ', 'order_id',
              'order_ref', 'shipping', 'tax', 'item_id', 'order_id.1', 'quantity',
              'title', 'unit price', 'description', 'shipping addr id', 'buyer id.2',
              'line1', 'line2', 'city', 'state', 'zip'],
            dtype='object')
[175]: stats.columns=['api_key_PK', 'logo_url_data', 'closed_status', 'metadata_data', '
       ⇔'PAYLOAD_ID', 'AMOUNT',
              'CURRENCY', 'STORE_NAME', 'BUYER_ID', 'ORDER_ID', 'DESCRIPTION',
              'METADATA', 'buyer_id', 'Email', 'name1', 'name2', 'phone', 'dob',
              'buyer_data_id', 'buyer_id.1', 'user_id', 'age', 'age_platform',
```

buyer_id

buyer_data_id

buyer_id.1

phone

3.250000e+00

2.000000e+00

5.500000e+00

3.000000e+00

2.500679e+09 4.998457e+09

3.250000e+00 5.500000e+00

7.750000e+00

7.496790e+09

7.750000e+00 1.000000e+01

4.000000e+00 5.000000e+00

1.000000e+01

9.876543e+09

```
'account_reg_date', 'days_since_1st_tx', 'ltv', 'order_count',
              'last_order_amt', 'last_order_at', 'last_order_date',
               'order_amt_last3m', 'order_count_last3m', 'additional_ship ad',
              'billing_address', 'delivery_locn_type', 'gender', 'subscription_count',
              'prev_payment_meth', 'number_of_points', 'order_item_categ', 'order_id',
              'order_ref', 'shipping', 'tax', 'item_id', 'order_id.1', 'quantity',
              'title', 'unit_price', 'description', 'shipping_addr_id', 'buyer_id.2',
              'line1', 'line2', 'city', 'state', 'zip']
[176]: stats
[176]:
         api_key_PK
                                   logo_url_data closed_status
       0
             abc123
                      https://example.com/logo1
       1
             xyz789
                      https://example.com/logo2
                                                                1
       2
             mno456
                      https://example.com/logo3
                                                                0
                      https://example.com/logo4
       3
             pgr789
                                                                1
       4
             lmn123
                      https://example.com/logo5
                      https://example.com/logo6
       5
             efg456
                                                                1
             hij789
                      https://example.com/logo7
       6
                                                                0
                      https://example.com/logo8
       7
             xyz123
                                                                1
             uvw456
                      https://example.com/logo9
       8
                                                               0
       9
                     https://example.com/logo10
             rst789
                                                                1
                                                        AMOUNT CURRENCY STORE_NAME \
                            metadata_data PAYLOAD_ID
       0
                                                     1
                                                        100.00
                                                                     USD
                                                                            Store A
                    {\key\": \"value\"}"
                                                        200.50
                                                                     EUR
                                                                            Store B
       1
                                                     2
       2
            {\key\": \"another_value\"}"
                                                     3
                                                        50.25
                                                                     GBP
                                                                            Store C
       3
          {\key\": \"different_value\"}"
                                                     4
                                                       300.75
                                                                     USD
                                                                            Store D
       4
                                                        150.50
                                                                            Store E
                                                     5
                                                                     EUR
       5
                {\key\": \"new_value\"}"
                                                     6
                                                         75.00
                                                                     GBP
                                                                            Store F
       6
                                                                            Store G
                                                     7
                                                        500.25
                                                                     USD
       7
             {\key\": \"unique value\"}"
                                                        250.75
                                                                            Store H
                                                     8
                                                                     EUR
             {\key\": \"sample_value\"}"
       8
                                                     9
                                                        120.00
                                                                     GBP
                                                                            Store I
       9
                                                        350.25
                                                                     USD
                                                                            Store J
                                       {}
                                                    10
          BUYER ID
                    ORDER ID
                                   DESCRIPTION METADATA buyer id
       0
                 1
                          101
                                 First payload
                                                  Meta 1
                                                                  1
                 2
                                Second payload
                                                                  2
       1
                          102
                                                  Meta 2
       2
                 3
                                 Third payload
                                                  Meta 3
                                                                  3
                          103
       3
                 4
                          104
                                Fourth payload
                                                  Meta 4
                                                                  4
       4
                 5
                                 Fifth payload
                                                  Meta 5
                                                                  5
                          105
                                                                  6
       5
                 6
                          106
                                 Sixth payload
                                                  Meta 6
       6
                 7
                          107
                               Seventh payload
                                                  Meta 7
                                                                  7
       7
                 8
                                Eighth payload
                                                                 8
                          108
                                                  Meta 8
       8
                 9
                          109
                                 Ninth payload
                                                  Meta 9
                                                                 9
```

Meta 10

10

Tenth payload

9

10

```
Email
                            name1
                                       name2
                                                    phone
                                                                    dob
0
    buyer1@example.com
                             John
                                         Doe
                                               1234567890
                                                             5/15/1990
1
    buyer2@example.com
                             Jane
                                       Smith
                                               9876543210
                                                            10/22/1985
2
    buyer3@example.com
                          Michael
                                     Johnson
                                               5551234567
                                                             3/10/1978
3
    buyer4@example.com
                            Emily
                                    Williams
                                               8889876543
                                                             12/1/1995
                            David
4
    buyer5@example.com
                                       Brown
                                               4445678901
                                                              7/8/1982
5
    buyer6@example.com
                            Sarah
                                       Jones
                                               3332345678
                                                             9/25/1998
6
    buyer7@example.com
                           Robert
                                      Miller
                                               2223456789
                                                            11/12/1972
7
    buyer8@example.com
                             Lisa
                                               7774567890
                                       Davis
                                                             6/18/1989
8
    buyer9@example.com
                          William
                                      Taylor
                                               6663456789
                                                             4/30/1993
   buyer10@example.com
                           Olivia
                                    Anderson
                                               1112345678
                                                              2/5/2000
   buyer_data_id buyer_id.1
                                user_id
                                          age age_platform account_reg_date
0
                1
                             1
                                     123
                                           31
                                                    Android
                                                                     8/15/2015
                2
                             2
                                     456
                                           38
                                                         iOS
                                                                     3/22/2018
1
2
                3
                             3
                                     789
                                           45
                                                    Android
                                                                     12/5/2012
3
                4
                             4
                                           29
                                     101
                                                         iOS
                                                                     7/20/2020
4
                5
                             5
                                     202
                                           41
                                                                     4/18/2017
                                                    Android
5
                6
                                            26
                             1
                                     303
                                                         iOS
                                                                    10/10/2019
                7
                             2
6
                                     404
                                           29
                                                    Android
                                                                     2/28/2016
7
                8
                             3
                                     505
                                           56
                                                         iOS
                                                                     7/15/2013
8
                9
                             4
                                     606
                                           33
                                                    Android
                                                                      4/3/2021
9
               10
                             5
                                     707
                                           28
                                                         iOS
                                                                      9/9/2018
   days_since_1st_tx
                              order_count
                                             last order amt
                                                              last order at
                         ltv
                         500
0
                  120
                                        10
                                                          50
                                                                         NaN
                         800
                                        15
                                                          75
                                                                         NaN
1
                   60
2
                  180
                        1000
                                        20
                                                         100
                                                                         NaN
3
                                         5
                   30
                         300
                                                          30
                                                                         NaN
4
                   90
                         700
                                        12
                                                          80
                                                                         NaN
5
                   45
                         400
                                         8
                                                          40
                                                                         NaN
                                        18
6
                  150
                         900
                                                          90
                                                                         NaN
7
                                        24
                  300
                        1200
                                                         120
                                                                         NaN
8
                   15
                         200
                                         4
                                                          20
                                                                         NaN
9
                   75
                         600
                                        14
                                                          70
                                                                         NaN
                                                              additional ship ad
  last_order_date
                    order_amt_last3m
                                        order_count_last3m
0
        6/28/2023
                                   300
                                                              Shipping Address 1
1
         7/8/2023
                                   200
                                                              Shipping Address 2
2
        6/12/2023
                                   350
                                                              Shipping Address 3
3
                                   150
                                                              Shipping Address 4
         7/2/2023
4
        6/18/2023
                                   250
                                                              Shipping Address 5
5
         7/6/2023
                                   180
                                                              Shipping Address 1
6
        6/22/2023
                                   300
                                                              Shipping Address 2
7
        7/12/2023
                                   400
                                                              Shipping Address 3
8
        6/28/2023
                                   100
                                                              Shipping Address 4
9
                                                              Shipping Address 5
         7/3/2023
                                   220
```

```
billing_address delivery_locn_type
                                                    subscription_count
                                           gender
0 Billing Address 1
                                    Urban
                                              Male
                                                                       3
                                                                       5
1 Billing Address 2
                                 Suburban
                                           Female
2 Billing Address 3
                                    Rural
                                              Male
                                                                       2
3 Billing Address 4
                                    Urban Female
                                                                       1
4 Billing Address 5
                                                                       4
                                 Suburban
                                              Male
                                                                       2
5 Billing Address 1
                                    Urban Female
                                                                       3
6 Billing Address 2
                                 Suburban
                                              Male
7 Billing Address 3
                                    Rural
                                           Female
                                                                       5
8 Billing Address 4
                                    Urban
                                              Male
                                                                       1
9 Billing Address 5
                                 Suburban Female
  prev_payment_meth number_of_points order_item_categ order_id order_ref
                                    200
                                              Electronics
0
        Credit Card
                                                                   1
                                                                          OR123
                                                                   2
1
             PayPal
                                    150
                                                 Clothing
                                                                          OR456
                                                                   3
2
                                    300
         Debit Card
                                              Electronics
                                                                          OR789
3
                                                                   4
             PayPal
                                     50
                                                 Clothing
                                                                          OR101
                                                                   5
4
        Credit Card
                                    180
                                              Electronics
                                                                          OR202
5
             PayPal
                                    120
                                                                   6
                                                                          OR303
                                                 Clothing
6
                                                                   7
         Debit Card
                                    250
                                              Electronics
                                                                          OR404
7
                                    450
                                                                   8
             PayPal
                                                 Clothing
                                                                          OR505
8
        Credit Card
                                     75
                                              Electronics
                                                                   9
                                                                          OR606
9
         Debit Card
                                    200
                                                 Clothing
                                                                  10
                                                                          OR707
   shipping
              tax
                    item id
                              order id.1
                                          quantity
                                                         title
                                                                 unit price
       10.0
0
             5.00
                          1
                                       1
                                                  2
                                                     Product A
1
        7.0
             3.50
                          2
                                       1
                                                     Product B
                                                                          15
2
       12.0 6.00
                          3
                                       2
                                                  1
                                                     Product C
                                                                          20
3
        8.0 4.00
                          4
                                       2
                                                  2 Product D
                                                                          10
4
       15.0
            7.50
                          5
                                       3
                                                    Product E
                                                                          30
                                                  3
5
        6.0 3.00
                                                  1 Product F
                          6
                                       3
                                                                          40
                          7
6
        9.0
            4.50
                                       4
                                                  2 Product G
                                                                          15
7
                                                  1 Product H
       11.0
             5.50
                          8
                                       4
                                                                          50
8
        7.5
             3.75
                          9
                                       5
                                                  2 Product I
                                                                          35
9
       13.0 6.50
                         10
                                       5
                                                  4 Product J
                                                                          12
  description
               shipping_addr_id
                                                                       line2
                                   buyer_id.2
                                                        line1
0
       Item A
                                1
                                             1
                                                  123 Main St
                                                                       Apt 4B
1
       Item B
                                2
                                             2
                                                   456 Elm Rd
                                                                    Unit 202
2
       Item C
                                3
                                             3
                                                  789 Oak Ave
                                                                     Suite 5
3
       Item D
                                4
                                             4
                                                 101 Maple St
                                                                          NaN
4
       Item E
                                5
                                             5
                                                  202 Pine Rd
                                                                Apartment 10
5
       Item F
                                6
                                             1
                                                 303 Cedar St
                                                                          NaN
6
       Item G
                                7
                                             2
                                                 404 Birch Ln
                                                                     Unit 15
7
       Item H
                                             3
                                                   505 Elm St
                                8
                                                                          NaN
8
                                9
                                             4
                                                   606 Oak Rd
       Item I
                                                                          NaN
```

```
9
              Item J
                                    10
                                                 5 707 Maple Ave
                                                                            NaN
                   city state
                                 zip
                               10001
       0
               New York
                           NY
       1
            Los Angeles
                           CA
                               90001
       2
                Chicago
                           IL
                               60601
       3
                Houston
                           TX
                               77002
       4
                  Miami
                           FL
                               33101
                Seattle
                              98101
       5
                           WA
       6
                 Boston
                                2201
                           MA
       7
                 Denver
                           CO
                              80201
                Atlanta
                           GA
                              30301
         San Francisco
                           CA 94101
[177]: stats[6:8]
                                 logo_url_data closed_status
[177]:
        api_key_PK
            hij789 https://example.com/logo7
       7
            xyz123 https://example.com/logo8
                                                            1
                        metadata_data PAYLOAD_ID AMOUNT CURRENCY STORE_NAME \
                                                7
                                                   500.25
                                                               USD
                                                                      Store G
       6
                                   {}
         {\key\": \"unique_value\"}"
                                                  250.75
                                                               EUR.
                                                                      Store H
                                  DESCRIPTION METADATA buyer_id
          BUYER ID ORDER ID
                                                                               Email \
       6
                         107
                              Seventh payload
                                                Meta 7
                                                               7 buyer7@example.com
                 7
                         108
                               Eighth payload
                                                Meta 8
                                                               8 buyer8@example.com
           name1
                                             dob buyer_data_id buyer_id.1
                                                                             user id \
                  name2
                               phone
       6 Robert Miller 2223456789
                                     11/12/1972
                                                                                  404
                                                              7
                  Davis 7774567890
                                                              8
                                                                          3
                                                                                 505
           Lisa
                                       6/18/1989
          age age_platform account_reg_date days_since_1st_tx
                                                                 ltv order_count \
       6
           29
                   Android
                                  2/28/2016
                                                           150
                                                                 900
                                                                               18
           56
                       iOS
                                  7/15/2013
                                                           300 1200
                                                                                24
       7
          last_order_amt
                        last_order_at last_order_date order_amt_last3m \
                                              6/22/2023
       6
                      90
                                    NaN
                                                                      300
       7
                     120
                                    NaN
                                              7/12/2023
                                                                      400
          order_count_last3m additional_ship_ad
                                                  billing_address
       6
                              Shipping Address 2 Billing Address 2
                           8 Shipping Address 3 Billing Address 3
       7
         delivery_locn_type gender subscription_count prev_payment_meth \
                   Suburban
                               Male
                                                      3
                                                               Debit Card
       6
       7
                      Rural Female
                                                      5
                                                                   PayPal
```

```
number_of_points order_item_categ order_id order_ref
                                                                   shipping
       6
                        250
                                 Electronics
                                                      7
                                                            OR404
                                                                         9.0
                                                                              4.5
       7
                        450
                                                      8
                                                            OR505
                                                                        11.0 5.5
                                    Clothing
          item_id order_id.1
                                quantity
                                               title unit_price description \
                             4
                                       2 Product G
                                                                       Item G
       6
                                                               15
       7
                8
                             4
                                       1 Product H
                                                              50
                                                                       Item H
          shipping_addr_id buyer_id.2
                                                 line1
                                                          line2
                                                                    city state
                                                                                  zip
       6
                                      2
                                                        Unit 15
                                                                 Boston
                                                                                 2201
                                         404 Birch Ln
                                                                            MA
       7
                          8
                                      3
                                            505 Elm St
                                                            NaN
                                                                 Denver
                                                                            CO
                                                                                80201
[178]: stats[1:5]
[178]:
         api key PK
                                  logo url data
                                                 closed status
                     https://example.com/logo2
       1
             xyz789
       2
                     https://example.com/logo3
                                                               0
             mno456
       3
             pqr789
                     https://example.com/logo4
                                                               1
             lmn123 https://example.com/logo5
                            metadata_data PAYLOAD_ID
                                                       AMOUNT CURRENCY STORE NAME
                    {\key\": \"value\"}"
       1
                                                     2
                                                        200.50
                                                                     EUR
                                                                            Store B
       2
            {\key\": \"another_value\"}"
                                                     3
                                                         50.25
                                                                     GBP
                                                                            Store C
          {\key\": \"different value\"}"
       3
                                                       300.75
                                                                     USD
                                                                            Store D
                                                     4
                                       {}
                                                       150.50
                                                                     EUR
                                                                            Store E
                    ORDER_ID
          BUYER_ID
                                  DESCRIPTION METADATA
                                                         buyer_id
                                                                                 Email \
       1
                 2
                          102
                               Second payload
                                                Meta 2
                                                                2
                                                                    buyer2@example.com
       2
                 3
                                Third payload
                                                 Meta 3
                                                                    buyer3@example.com
                          103
                                                                3
       3
                 4
                               Fourth payload
                                                 Meta 4
                                                                4
                                                                    buyer4@example.com
                          104
       4
                 5
                          105
                                Fifth payload
                                                 Meta 5
                                                                5
                                                                    buyer5@example.com
                      name2
                                                       buyer_data_id
                                                                      buyer_id.1
            name1
                                   phone
                                                  dob
                      Smith
                              9876543210
                                          10/22/1985
                                                                    2
       1
             Jane
       2
          Michael
                     Johnson
                              5551234567
                                           3/10/1978
                                                                    3
                                                                                3
       3
            Emily
                   Williams
                              8889876543
                                            12/1/1995
                                                                    4
                                                                                4
                                                                    5
                                                                                5
            David
                              4445678901
                                            7/8/1982
                      Brown
          user_id
                   age age_platform account_reg_date
                                                        days_since_1st_tx
                                                                             ltv \
       1
              456
                                 iOS
                                             3/22/2018
                                                                             800
       2
              789
                    45
                             Android
                                             12/5/2012
                                                                       180
                                                                            1000
       3
              101
                    29
                                 iOS
                                             7/20/2020
                                                                        30
                                                                             300
       4
              202
                    41
                             Android
                                             4/18/2017
                                                                        90
                                                                             700
          order_count last_order_amt last_order_at last_order_date
                                    75
                                                   NaN
                                                              7/8/2023
       1
                   15
```

```
3
                    5
                                    30
                                                              7/2/2023
                                                   NaN
       4
                   12
                                    80
                                                   NaN
                                                             6/18/2023
          order_amt_last3m
                             order_count_last3m
                                                 additional_ship_ad \
                                                 Shipping Address 2
       1
                        200
       2
                        350
                                              7
                                                 Shipping Address 3
       3
                                                  Shipping Address 4
                        150
                        250
       4
                                                  Shipping Address 5
                                                 gender subscription_count
            billing_address delivery_locn_type
       1 Billing Address 2
                                       Suburban
                                                 Female
                                                                            2
       2 Billing Address 3
                                                    Male
                                          Rural
                                          Urban Female
       3 Billing Address 4
                                                                            1
       4 Billing Address 5
                                       Suburban
                                                    Male
         prev_payment_meth
                            number_of_points order_item_categ order_id order_ref \
       1
                    PavPal
                                          150
                                                       Clothing
                                                                         2
                                                                               OR456
                                                                         3
       2
                Debit Card
                                          300
                                                    Electronics
                                                                               OR789
                                                                         4
       3
                    PayPal
                                           50
                                                       Clothing
                                                                               OR101
               Credit Card
                                          180
                                                    Electronics
                                                                         5
                                                                               OR202
                                  order_id.1
                                               quantity
          shipping
                   tax
                         item_id
                                                              title
                                                                     unit_price
       1
               7.0
                    3.5
                                2
                                             1
                                                          Product B
                                                       3
                                             2
       2
              12.0 6.0
                                3
                                                          Product C
                                                                              20
                                             2
                                                         Product D
       3
               8.0
                    4.0
                                4
                                                                              10
              15.0 7.5
                                             3
                                                       3 Product E
                                5
         description
                      shipping_addr_id
                                        buyer_id.2
                                                             line1
                                                                            line2
       1
              Item B
                                      2
                                                        456 Elm Rd
                                                                         Unit 202
       2
              Item C
                                      3
                                                   3
                                                       789 Oak Ave
                                                                          Suite 5
       3
              Item D
                                                   4
                                                      101 Maple St
                                      4
                                                                              NaN
       4
              Item E
                                      5
                                                       202 Pine Rd
                                                                    Apartment 10
                 city state
                                zip
       1
          Los Angeles
                         CA
                            90001
                             60601
       2
              Chicago
                         IL
       3
              Houston
                         TX
                             77002
       4
                Miami
                         FL 33101
[179]: stats[3:]
                                   logo_url_data closed_status
[179]:
         api_key_PK
                      https://example.com/logo4
       3
             pgr789
       4
             lmn123
                      https://example.com/logo5
                                                               0
                      https://example.com/logo6
       5
             efg456
                                                               1
       6
                      https://example.com/logo7
             hij789
                                                               0
```

20

2

100

NaN

6/12/2023

```
7
      xyz123
                https://example.com/logo8
                                                           1
8
                                                           0
      uvw456
                https://example.com/logo9
9
      rst789
               https://example.com/logo10
                                                           1
                     metadata_data PAYLOAD_ID
                                                   AMOUNT CURRENCY STORE_NAME
   {\key\": \"different_value\"}"
3
                                                4
                                                   300.75
                                                                USD
                                                                        Store D
4
                                                   150.50
                                                                EUR
                                                                        Store E
                                               5
5
         {\key\": \"new_value\"}"
                                               6
                                                    75.00
                                                                GBP
                                                                        Store F
6
                                 {}
                                               7
                                                   500.25
                                                                USD
                                                                        Store G
7
      {\key\": \"unique_value\"}"
                                               8
                                                   250.75
                                                                EUR
                                                                        Store H
8
      {\key\": \"sample value\"}"
                                                   120.00
                                                                GBP
                                                                        Store I
                                               9
9
                                 {}
                                               10
                                                   350.25
                                                                USD
                                                                        Store J
   BUYER_ID
              ORDER_ID
                             DESCRIPTION METADATA
                                                     buyer_id
3
           4
                                                             4
                   104
                          Fourth payload
                                            Meta 4
4
          5
                                                             5
                   105
                           Fifth payload
                                            Meta 5
5
           6
                                                             6
                   106
                           Sixth payload
                                            Meta 6
           7
6
                   107
                         Seventh payload
                                            Meta 7
                                                             7
7
                          Eighth payload
                                                             8
          8
                   108
                                            Meta 8
                                                             9
8
          9
                   109
                           Ninth payload
                                            Meta 9
9
         10
                                                            10
                   110
                           Tenth payload
                                           Meta 10
                  Email
                                                                   dob
                            name1
                                       name2
                                                    phone
                                              8889876543
3
    buyer4@example.com
                                   Williams
                                                             12/1/1995
                            Emily
4
    buyer5@example.com
                            David
                                       Brown
                                              4445678901
                                                              7/8/1982
5
    buyer6@example.com
                            Sarah
                                       Jones
                                              3332345678
                                                             9/25/1998
    buyer7@example.com
                                              2223456789
6
                           Robert
                                      Miller
                                                            11/12/1972
7
    buyer8@example.com
                             Lisa
                                       Davis 7774567890
                                                             6/18/1989
8
    buyer9@example.com
                          William
                                      Taylor
                                              6663456789
                                                             4/30/1993
   buyer10@example.com
                           Olivia
                                   Anderson
                                              1112345678
                                                              2/5/2000
   buyer_data_id
                   buyer_id.1
                                user_id
                                          age age_platform account_reg_date
3
                4
                             4
                                     101
                                           29
                                                         iOS
                                                                    7/20/2020
                5
                             5
4
                                     202
                                           41
                                                    Android
                                                                    4/18/2017
5
                6
                             1
                                     303
                                           26
                                                         iOS
                                                                   10/10/2019
6
                7
                             2
                                     404
                                           29
                                                    Android
                                                                    2/28/2016
7
                8
                             3
                                     505
                                           56
                                                         iOS
                                                                    7/15/2013
8
                9
                             4
                                     606
                                           33
                                                    Android
                                                                      4/3/2021
9
                             5
               10
                                     707
                                           28
                                                         iOS
                                                                      9/9/2018
                              order count
   days_since_1st_tx
                         ltv
                                            last order amt
                                                              last order at
3
                   30
                         300
                                         5
                                                          30
                                                                         NaN
                                        12
4
                   90
                         700
                                                          80
                                                                         NaN
5
                   45
                         400
                                         8
                                                          40
                                                                         NaN
6
                  150
                         900
                                        18
                                                          90
                                                                         NaN
7
                                        24
                  300
                        1200
                                                         120
                                                                         NaN
8
                   15
                         200
                                         4
                                                          20
                                                                         NaN
```

```
9
                  75
                        600
                                       14
                                                        70
                                                                      NaN
                   order_amt_last3m
                                      order_count_last3m additional_ship_ad \
  last_order_date
3
                                                           Shipping Address 4
         7/2/2023
                                  150
4
        6/18/2023
                                  250
                                                           Shipping Address 5
5
         7/6/2023
                                  180
                                                           Shipping Address 1
6
        6/22/2023
                                  300
                                                            Shipping Address 2
7
                                                        8 Shipping Address 3
        7/12/2023
                                  400
8
        6/28/2023
                                                         2 Shipping Address 4
                                  100
9
         7/3/2023
                                  220
                                                         5 Shipping Address 5
     billing_address delivery_locn_type gender subscription_count
3 Billing Address 4
                                   Urban
                                           Female
4 Billing Address 5
                                Suburban
                                             Male
                                                                     4
5 Billing Address 1
                                                                     2
                                   Urban
                                          Female
                                                                     3
6 Billing Address 2
                                Suburban
                                             Male
                                                                     5
7 Billing Address 3
                                   Rural
                                           Female
8 Billing Address 4
                                             Male
                                                                     1
                                   Urban
9 Billing Address 5
                                                                     3
                                Suburban Female
  prev_payment_meth number_of_points order_item_categ order_id order_ref \
             PayPal
                                    50
                                                Clothing
                                                                  4
                                                                         OR101
3
4
        Credit Card
                                    180
                                             Electronics
                                                                  5
                                                                        OR202
                                                                  6
5
                                   120
                                                                        OR303
             PayPal
                                                Clothing
6
         Debit Card
                                   250
                                             Electronics
                                                                  7
                                                                        OR404
7
             PayPal
                                   450
                                                Clothing
                                                                  8
                                                                        OR505
        Credit Card
                                    75
                                             Electronics
                                                                  9
                                                                        OR606
         Debit Card
                                   200
                                                Clothing
                                                                 10
                                                                        OR707
                             order_id.1
                                         quantity
                                                        title
                                                                unit_price
   shipping
              tax
                    item_id
3
        8.0
             4.00
                          4
                                       2
                                                   Product D
                                                                         10
4
       15.0
             7.50
                                       3
                                                    Product E
                          5
                                                 3
                                                                         30
        6.0
             3.00
                          6
                                       3
                                                    Product F
                                                                         40
6
                          7
                                                 2 Product G
        9.0 4.50
                                       4
                                                                         15
7
       11.0 5.50
                          8
                                       4
                                                 1 Product H
                                                                         50
8
        7.5
             3.75
                          9
                                       5
                                                 2 Product I
                                                                         35
9
       13.0 6.50
                         10
                                      5
                                                 4 Product J
                                                                         12
  description shipping_addr_id buyer_id.2
                                                        line1
                                                                      line2
       Item D
                                                101 Maple St
                                                                         NaN
3
                               4
4
       Item E
                               5
                                            5
                                                 202 Pine Rd
                                                               Apartment 10
       Item F
5
                               6
                                            1
                                                303 Cedar St
                                                                         NaN
6
       Item G
                               7
                                            2
                                                404 Birch Ln
                                                                    Unit 15
7
       Item H
                               8
                                            3
                                                  505 Elm St
                                                                        NaN
8
       Item I
                                            4
                                                  606 Oak Rd
                               9
                                                                        NaN
9
       Item J
                                               707 Maple Ave
                              10
                                                                        NaN
```

```
5
                 Seattle
                             WA
                                 98101
       6
                  Boston
                                  2201
                             MA
       7
                                 80201
                  Denver
                             CO
                                 30301
       8
                 Atlanta
                             GA
          San Francisco
                             CA
                                 94101
[180]: stats[::-1]
[180]:
                                     logo_url_data
                                                     closed status
         api_key_PK
       9
              rst789
                      https://example.com/logo10
       8
              uvw456
                       https://example.com/logo9
                                                                  0
       7
                       https://example.com/logo8
              xyz123
                                                                  1
       6
             hij789
                       https://example.com/logo7
                                                                  0
       5
                       https://example.com/logo6
              efg456
                                                                  1
       4
                       https://example.com/logo5
              1mn123
                                                                  0
       3
              pqr789
                       https://example.com/logo4
                                                                  1
       2
                       https://example.com/logo3
                                                                  0
             mno456
                       https://example.com/logo2
       1
              xyz789
                                                                  1
       0
              abc123
                       https://example.com/logo1
                                                                  0
                             metadata_data PAYLOAD_ID
                                                           AMOUNT CURRENCY STORE_NAME
       9
                                                      10
                                                           350.25
                                                                                Store J
                                                                        USD
       8
              {\key\": \"sample_value\"}"
                                                       9
                                                           120.00
                                                                        GBP
                                                                                Store I
       7
              {\key\": \"unique_value\"}"
                                                       8
                                                           250.75
                                                                        EUR
                                                                                Store H
       6
                                                       7
                                                           500.25
                                                                        USD
                                                                                Store G
                                         {}
       5
                 {\key\": \"new_value\"}"
                                                       6
                                                            75.00
                                                                        GBP
                                                                                Store F
       4
                                                           150.50
                                                                                Store E
                                         {}
                                                       5
                                                                        EUR
          {\key\": \"different value\"}"
                                                           300.75
       3
                                                       4
                                                                        USD
                                                                                Store D
       2
             {\key\": \"another_value\"}"
                                                       3
                                                            50.25
                                                                        GBP
                                                                                Store C
                     {\key\": \"value\"}"
                                                       2
                                                           200.50
                                                                        EUR
                                                                                Store B
       1
       0
                                         {}
                                                           100.00
                                                                        USD
                                                                                Store A
          BUYER_ID
                     ORDER_ID
                                     DESCRIPTION METADATA
                                                             buyer_id
       9
                 10
                           110
                                  Tenth payload
                                                   Meta 10
                                                                    10
                  9
                           109
                                   Ninth payload
                                                                    9
       8
                                                    Meta 9
       7
                  8
                                 Eighth payload
                                                    Meta 8
                                                                     8
                           108
                  7
                                                                     7
       6
                                Seventh payload
                                                    Meta 7
                           107
       5
                  6
                           106
                                  Sixth payload
                                                    Meta 6
                                                                     6
       4
                  5
                           105
                                  Fifth payload
                                                    Meta 5
                                                                     5
       3
                  4
                                 Fourth payload
                                                    Meta 4
                           104
                                                                     4
       2
                  3
                           103
                                  Third payload
                                                    Meta 3
                                                                     3
       1
                  2
                           102
                                 Second payload
                                                    Meta 2
                                                                     2
                                  First payload
       0
                  1
                           101
                                                    Meta 1
                                                                     1
```

zip

77002

33101

city state

ΤX

FL

Houston

Miami

3

```
Email
                            name1
                                       name2
                                                    phone
                                                                    dob
   buyer10@example.com
                                               1112345678
                                                              2/5/2000
9
                           Olivia
                                    Anderson
8
    buyer9@example.com
                          William
                                      Taylor
                                               6663456789
                                                             4/30/1993
7
    buyer8@example.com
                             Lisa
                                       Davis
                                               7774567890
                                                             6/18/1989
6
    buyer7@example.com
                           Robert
                                      Miller
                                               2223456789
                                                            11/12/1972
5
    buyer6@example.com
                            Sarah
                                       Jones
                                               3332345678
                                                             9/25/1998
4
    buyer5@example.com
                            David
                                       Brown
                                               4445678901
                                                              7/8/1982
3
    buyer4@example.com
                            Emily
                                    Williams
                                               8889876543
                                                             12/1/1995
2
    buyer3@example.com
                          Michael
                                     Johnson
                                               5551234567
                                                             3/10/1978
1
    buyer2@example.com
                             Jane
                                       Smith
                                               9876543210
                                                            10/22/1985
0
    buyer1@example.com
                             John
                                         Doe
                                               1234567890
                                                             5/15/1990
   buyer_data_id buyer_id.1
                                user_id
                                          age age_platform account_reg_date
9
               10
                             5
                                     707
                                           28
                                                         iOS
                                                                      9/9/2018
8
                9
                             4
                                     606
                                           33
                                                    Android
                                                                      4/3/2021
7
                8
                             3
                                     505
                                           56
                                                         iOS
                                                                     7/15/2013
                7
                             2
6
                                     404
                                           29
                                                    Android
                                                                     2/28/2016
5
                6
                             1
                                     303
                                           26
                                                         iOS
                                                                    10/10/2019
4
                5
                             5
                                           41
                                     202
                                                    Android
                                                                     4/18/2017
                4
3
                             4
                                     101
                                           29
                                                         iOS
                                                                     7/20/2020
2
                3
                             3
                                     789
                                           45
                                                    Android
                                                                     12/5/2012
                2
1
                             2
                                     456
                                            38
                                                         iOS
                                                                     3/22/2018
0
                1
                             1
                                     123
                                           31
                                                                     8/15/2015
                                                    Android
   days_since_1st_tx
                              order_count
                                            last_order_amt
                                                              last_order_at
                         ltv
9
                   75
                         600
                                        14
                                                          70
                                                                         NaN
                   15
                         200
                                         4
                                                          20
                                                                         NaN
8
7
                  300
                        1200
                                        24
                                                         120
                                                                         NaN
6
                  150
                         900
                                        18
                                                          90
                                                                         NaN
5
                   45
                         400
                                         8
                                                          40
                                                                         NaN
4
                   90
                         700
                                        12
                                                          80
                                                                         NaN
3
                                         5
                   30
                         300
                                                          30
                                                                         NaN
2
                                        20
                  180
                        1000
                                                         100
                                                                         NaN
1
                         800
                                        15
                                                          75
                                                                         NaN
                   60
0
                  120
                         500
                                        10
                                                                         NaN
                                                              additional ship ad
  last_order_date
                   order_amt_last3m
                                        order_count_last3m
9
         7/3/2023
                                   220
                                                              Shipping Address 5
8
        6/28/2023
                                   100
                                                              Shipping Address 4
7
        7/12/2023
                                   400
                                                              Shipping Address 3
6
        6/22/2023
                                   300
                                                              Shipping Address 2
                                                              Shipping Address 1
5
         7/6/2023
                                   180
4
        6/18/2023
                                   250
                                                              Shipping Address 5
3
         7/2/2023
                                   150
                                                              Shipping Address 4
2
        6/12/2023
                                   350
                                                              Shipping Address 3
1
         7/8/2023
                                   200
                                                              Shipping Address 2
0
                                                              Shipping Address 1
        6/28/2023
                                   300
```

```
billing_address delivery_locn_type
                                           gender
                                                    subscription_count
9 Billing Address 5
                                 Suburban
                                           Female
                                                                       3
                                                                       1
8 Billing Address 4
                                    Urban
                                              Male
7 Billing Address 3
                                           Female
                                                                       5
                                    Rural
                                                                       3
6 Billing Address 2
                                 Suburban
                                              Male
5 Billing Address 1
                                    Urban Female
                                                                       2
                                                                       4
4 Billing Address 5
                                 Suburban
                                              Male
3 Billing Address 4
                                    Urban Female
                                                                       1
2 Billing Address 3
                                    Rural
                                              Male
                                                                       2
1 Billing Address 2
                                                                       5
                                 Suburban Female
0 Billing Address 1
                                    Urban
                                              Male
  prev_payment_meth number_of_points order_item_categ order_id order_ref
                                    200
9
         Debit Card
                                                 Clothing
                                                                  10
                                                                          OR707
        Credit Card
                                     75
                                                                   9
8
                                              Electronics
                                                                          OR606
7
                                                                   8
             PayPal
                                    450
                                                 Clothing
                                                                          OR505
6
                                                                   7
         Debit Card
                                    250
                                              Electronics
                                                                          OR404
5
                                                                   6
             PayPal
                                    120
                                                 Clothing
                                                                          OR303
                                                                   5
4
        Credit Card
                                    180
                                              Electronics
                                                                          OR202
3
                                                                   4
             PayPal
                                     50
                                                 Clothing
                                                                          OR101
2
                                    300
                                              Electronics
                                                                   3
         Debit Card
                                                                          OR789
1
                                                 Clothing
                                                                   2
                                                                          OR456
             PayPal
                                    150
0
        Credit Card
                                    200
                                              Electronics
                                                                          OR123
   shipping
              tax
                    item id
                              order id.1
                                          quantity
                                                         title
                                                                 unit price
       13.0
9
             6.50
                         10
                                       5
                                                  4
                                                    Product J
8
        7.5
             3.75
                          9
                                       5
                                                  2 Product I
                                                                          35
7
       11.0
             5.50
                          8
                                       4
                                                  1
                                                     Product H
                                                                          50
                                                  2 Product G
        9.0 4.50
                          7
                                       4
6
                                                                          15
5
        6.0
            3.00
                                                    Product F
                                                                          40
                          6
                                       3
                                                  1
4
       15.0
            7.50
                                                  3 Product E
                          5
                                       3
                                                                          30
3
        8.0
             4.00
                          4
                                       2
                                                  2 Product D
                                                                          10
2
                          3
                                       2
                                                  1 Product C
       12.0 6.00
                                                                          20
1
        7.0
             3.50
                          2
                                       1
                                                  3 Product B
                                                                          15
0
       10.0 5.00
                          1
                                       1
                                                  2 Product A
                                                                          25
  description
               shipping_addr_id
                                   buyer_id.2
                                                        line1
                                                                        line2
9
       Item J
                               10
                                             5
                                                707 Maple Ave
                                                                          NaN
8
       Item I
                                9
                                             4
                                                   606 Oak Rd
                                                                          NaN
7
       Item H
                                8
                                             3
                                                   505 Elm St
                                                                          NaN
6
       Item G
                                7
                                             2
                                                 404 Birch Ln
                                                                     Unit 15
5
       Item F
                                                 303 Cedar St
                                                                          NaN
                                6
                                             1
4
       Item E
                                5
                                             5
                                                  202 Pine Rd
                                                                Apartment 10
3
       Item D
                                4
                                             4
                                                 101 Maple St
                                                                          NaN
2
       Item C
                                3
                                             3
                                                  789 Oak Ave
                                                                     Suite 5
                                                   456 Elm Rd
                                2
                                             2
1
       Item B
                                                                    Unit 202
```

```
0
               Item A
                                        1
                                                     1
                                                           123 Main St
                                                                               Apt 4B
                    city state
                                    zip
       9
          San Francisco
                             CA
                                 94101
       8
                 Atlanta
                             GA
                                 30301
                                 80201
       7
                  Denver
                             CO
       6
                                  2201
                  Boston
                             MA
       5
                 Seattle
                             WA
                                 98101
       4
                                 33101
                   Miami
                             FL
       3
                 Houston
                                 77002
                             TX
       2
                                 60601
                 Chicago
                             IL
       1
            Los Angeles
                             CA
                                 90001
       0
                New York
                             NY
                                 10001
[181]: stats[::2]
[181]:
         api_key_PK
                                    logo_url_data
                                                    closed status
       0
              abc123
                      https://example.com/logo1
                                                                 0
       2
              mno456
                      https://example.com/logo3
                                                                 0
       4
                                                                 0
              lmn123
                      https://example.com/logo5
       6
              hij789
                      https://example.com/logo7
                                                                 0
       8
              uvw456
                                                                 0
                      https://example.com/logo9
                           metadata_data
                                          PAYLOAD_ID
                                                        AMOUNT CURRENCY STORE NAME
                                                     1
       0
                                       {}
                                                        100.00
                                                                      USD
                                                                             Store A
          {\key\": \"another_value\"}"
       2
                                                     3
                                                         50.25
                                                                      GBP
                                                                             Store C
       4
                                       {}
                                                     5
                                                        150.50
                                                                     EUR
                                                                             Store E
       6
                                       {}
                                                     7
                                                        500.25
                                                                     USD
                                                                             Store G
       8
           {\key\": \"sample_value\"}"
                                                        120.00
                                                                      GBP
                                                                             Store I
                     ORDER ID
          BUYER ID
                                     DESCRIPTION METADATA
                                                            buyer id
                                                                                      Email
       0
                  1
                           101
                                  First payload
                                                    Meta 1
                                                                        buyer1@example.com
       2
                  3
                           103
                                   Third payload
                                                    Meta 3
                                                                     3
                                                                        buyer3@example.com
       4
                  5
                           105
                                                    Meta 5
                                                                        buyer5@example.com
                                   Fifth payload
                                                                    5
                  7
       6
                           107
                                Seventh payload
                                                    Meta 7
                                                                    7
                                                                        buyer7@example.com
       8
                  9
                           109
                                   Ninth payload
                                                    Meta 9
                                                                        buyer9@example.com
                      name2
             name1
                                    phone
                                                   dob
                                                        buyer_data_id
                                                                         buyer_id.1
       0
                              1234567890
                                            5/15/1990
              John
                         Doe
                                                                      1
                                                                                   1
       2
                                                                      3
                                                                                   3
          Michael
                    Johnson
                              5551234567
                                            3/10/1978
       4
            David
                      Brown
                              4445678901
                                             7/8/1982
                                                                      5
                                                                                   5
                     Miller
                              2223456789
                                                                      7
                                                                                   2
       6
           Robert
                                           11/12/1972
       8
          William
                     Taylor
                              6663456789
                                            4/30/1993
                                                                      9
                                                                                   4
          user_id
                    age age_platform account_reg_date
                                                           days_since_1st_tx
                                                                                ltv
       0
               123
                     31
                                              8/15/2015
                                                                                 500
                              Android
                                                                          120
       2
               789
                                               12/5/2012
                                                                               1000
                     45
                              Android
                                                                          180
```

```
700
4
       202
             41
                     Android
                                     4/18/2017
                                                                90
6
       404
             29
                                     2/28/2016
                                                                     900
                     Android
                                                               150
8
       606
             33
                     Android
                                      4/3/2021
                                                                15
                                                                      200
   order_count
                last_order_amt last_order_at last_order_date \
0
            10
                             50
                                           NaN
                                                      6/28/2023
2
            20
                            100
                                           NaN
                                                      6/12/2023
4
            12
                             80
                                           NaN
                                                      6/18/2023
6
                             90
                                                      6/22/2023
            18
                                           NaN
8
             4
                             20
                                           NaN
                                                      6/28/2023
   order_amt_last3m
                     order_count_last3m additional_ship_ad \
0
                300
                                          Shipping Address 1
                350
2
                                       7
                                          Shipping Address 3
4
                250
                                          Shipping Address 5
6
                300
                                       7
                                          Shipping Address 2
8
                100
                                          Shipping Address 4
     billing_address delivery_locn_type gender
                                                 subscription_count
0 Billing Address 1
                                   Urban
                                           Male
                                                                   3
2 Billing Address 3
                                   Rural
                                           Male
                                                                    2
4 Billing Address 5
                                           Male
                                                                   4
                                Suburban
6 Billing Address 2
                                Suburban
                                           Male
                                                                   3
8 Billing Address 4
                                           Male
                                                                    1
                                   Urban
 prev_payment_meth number_of_points order_item_categ order_id order_ref \
        Credit Card
                                            Electronics
                                   200
                                                                 1
2
        Debit Card
                                   300
                                            Electronics
                                                                 3
                                                                        OR789
4
        Credit Card
                                   180
                                            Electronics
                                                                 5
                                                                        OR202
        Debit Card
                                   250
                                            Electronics
                                                                 7
                                                                        OR404
6
8
        Credit Card
                                    75
                                            Electronics
                                                                        OR606
                             order_id.1
                                         quantity
   shipping
              tax
                   item_id
                                                        title
                                                               unit_price
0
       10.0 5.00
                          1
                                      1
                                                 2 Product A
                                                                        25
                          3
                                      2
2
       12.0 6.00
                                                 1 Product C
                                                                        20
4
       15.0 7.50
                          5
                                      3
                                                 3 Product E
                                                                        30
6
        9.0 4.50
                          7
                                      4
                                                 2 Product G
                                                                        15
        7.5 3.75
                          9
                                      5
                                                 2 Product I
                                                                        35
  description
               shipping_addr_id buyer_id.2
                                                      line1
                                                                    line2
0
       Item A
                                                123 Main St
                                                                   Apt 4B
                               1
2
       Item C
                               3
                                                789 Oak Ave
                                           3
                                                                  Suite 5
4
       Item E
                               5
                                           5
                                                202 Pine Rd Apartment 10
6
       Item G
                               7
                                           2 404 Birch Ln
                                                                  Unit 15
8
       Item I
                               9
                                                 606 Oak Rd
                                                                      NaN
       city state
                     zip
```

```
4
              Miami
                        FL
                            33101
       6
             Boston
                        MA
                             2201
       8
           Atlanta
                        GA
                            30301
[182]: stats
                                                                      \
[182]:
         api_key_PK
                                     logo_url_data
                                                     closed_status
                        https://example.com/logo1
              abc123
       1
              xyz789
                        https://example.com/logo2
                                                                   1
       2
              mno456
                        https://example.com/logo3
                                                                   0
       3
              pqr789
                        https://example.com/logo4
                                                                   1
       4
              lmn123
                        https://example.com/logo5
                                                                   0
       5
                        https://example.com/logo6
              efg456
                                                                   1
       6
             hij789
                        https://example.com/logo7
                                                                   0
       7
              xyz123
                        https://example.com/logo8
                                                                   1
              uvw456
                        https://example.com/logo9
       8
                                                                   0
       9
              rst789
                      https://example.com/logo10
                                                                   1
                             metadata_data PAYLOAD_ID
                                                           AMOUNT CURRENCY STORE_NAME
       0
                                                           100.00
                                                                        USD
                                                                                Store A
                                                        1
                     {\key\": \"value\"}"
       1
                                                        2
                                                           200.50
                                                                        EUR
                                                                                Store B
       2
             {\key\": \"another_value\"}"
                                                        3
                                                            50.25
                                                                        GBP
                                                                                Store C
           {\key\": \"different_value\"}"
       3
                                                           300.75
                                                                                Store D
                                                        4
                                                                        USD
       4
                                                       5
                                                           150.50
                                                                        EUR
                                                                                Store E
       5
                 {\key\": \"new_value\"}"
                                                        6
                                                            75.00
                                                                        GBP
                                                                                Store F
       6
                                         {}
                                                       7
                                                           500.25
                                                                        USD
                                                                                Store G
       7
              {\key\": \"unique_value\"}"
                                                       8
                                                           250.75
                                                                        EUR
                                                                                Store H
              {\key\": \"sample_value\"}"
                                                                        GBP
                                                                                Store I
       8
                                                       9
                                                           120.00
       9
                                                                        USD
                                         {}
                                                           350.25
                                                                                Store J
                                                       10
          BUYER_ID
                     ORDER_ID
                                     DESCRIPTION METADATA
                                                             buyer_id
       0
                           101
                                   First payload
                                                    Meta 1
                  1
                                                                     1
                  2
                                                                     2
                                                    Meta 2
       1
                           102
                                  Second payload
                  3
       2
                           103
                                   Third payload
                                                    Meta 3
                                                                     3
       3
                  4
                           104
                                  Fourth payload
                                                    Meta 4
                                                                     4
       4
                  5
                                                                     5
                           105
                                   Fifth payload
                                                    Meta 5
       5
                  6
                                   Sixth payload
                                                    Meta 6
                                                                     6
                           106
                  7
                                                                     7
       6
                           107
                                Seventh payload
                                                    Meta 7
       7
                  8
                           108
                                  Eighth payload
                                                    Meta 8
                                                                     8
       8
                  9
                           109
                                   Ninth payload
                                                    Meta 9
                                                                     9
       9
                 10
                           110
                                   Tenth payload
                                                   Meta 10
                                                                    10
                          Email
                                    name1
                                               name2
                                                            phone
                                                                           dob
       0
           buyer1@example.com
                                     John
                                                       1234567890
                                                                     5/15/1990
                                                 Doe
       1
           buyer2@example.com
                                     Jane
                                               Smith
                                                      9876543210
                                                                    10/22/1985
```

0

2

New York

Chicago

NY

ΙL

10001

```
2
    buyer3@example.com
                          Michael
                                     Johnson
                                               5551234567
                                                             3/10/1978
3
    buyer4@example.com
                            Emily
                                    Williams
                                               8889876543
                                                             12/1/1995
4
    buyer5@example.com
                            David
                                       Brown
                                               4445678901
                                                              7/8/1982
5
    buyer6@example.com
                            Sarah
                                       Jones
                                               3332345678
                                                             9/25/1998
6
    buyer7@example.com
                           Robert
                                      Miller
                                               2223456789
                                                            11/12/1972
7
    buyer8@example.com
                             Lisa
                                       Davis
                                               7774567890
                                                             6/18/1989
    buyer9@example.com
                                      Taylor
                                                             4/30/1993
8
                          William
                                               6663456789
   buyer10@example.com
                           Olivia
                                    Anderson
                                               1112345678
                                                              2/5/2000
                                 user_id
                                          age age_platform account_reg_date
   buyer_data_id
                   buyer_id.1
0
                             1
                                     123
                                            31
                                                     Android
                                                                     8/15/2015
1
                2
                             2
                                     456
                                            38
                                                         iOS
                                                                     3/22/2018
                3
2
                             3
                                     789
                                            45
                                                    Android
                                                                     12/5/2012
                4
3
                             4
                                     101
                                            29
                                                         iOS
                                                                     7/20/2020
4
                5
                             5
                                     202
                                            41
                                                    Android
                                                                     4/18/2017
5
                6
                             1
                                     303
                                            26
                                                         iOS
                                                                    10/10/2019
                7
                             2
6
                                     404
                                            29
                                                     Android
                                                                     2/28/2016
7
                8
                             3
                                     505
                                            56
                                                                     7/15/2013
                                                         iOS
8
                9
                                            33
                             4
                                     606
                                                     Android
                                                                      4/3/2021
9
               10
                             5
                                     707
                                            28
                                                         iOS
                                                                      9/9/2018
                              order count
   days_since_1st_tx
                                             last order amt
                                                              last order at
                         ltv
0
                  120
                         500
                                                          50
                                                                         NaN
                                        10
                         800
1
                   60
                                        15
                                                          75
                                                                         NaN
2
                  180
                        1000
                                        20
                                                         100
                                                                         NaN
3
                   30
                         300
                                         5
                                                          30
                                                                         NaN
                         700
4
                   90
                                        12
                                                          80
                                                                         NaN
5
                   45
                         400
                                         8
                                                          40
                                                                         NaN
6
                  150
                         900
                                        18
                                                          90
                                                                          NaN
7
                  300
                        1200
                                        24
                                                         120
                                                                         NaN
8
                   15
                         200
                                         4
                                                          20
                                                                          NaN
9
                   75
                         600
                                        14
                                                          70
                                                                         NaN
  last_order_date
                    order_amt_last3m
                                        order_count_last3m
                                                               additional_ship_ad
0
        6/28/2023
                                   300
                                                              Shipping Address 1
1
         7/8/2023
                                   200
                                                              Shipping Address 2
2
        6/12/2023
                                   350
                                                           7
                                                              Shipping Address 3
3
         7/2/2023
                                   150
                                                              Shipping Address 4
4
        6/18/2023
                                   250
                                                              Shipping Address 5
5
                                                              Shipping Address 1
         7/6/2023
                                   180
6
                                                              Shipping Address 2
        6/22/2023
                                   300
7
                                                              Shipping Address 3
        7/12/2023
                                   400
8
        6/28/2023
                                   100
                                                              Shipping Address 4
9
         7/3/2023
                                   220
                                                              Shipping Address 5
                                                     subscription_count
     billing_address delivery_locn_type
                                             gender
                                                                        3
   Billing Address 1
                                     Urban
                                               Male
```

1	Billing Address	2	Suburban	Female		5		
2	Billing Address		Rural			5 2		
3	Billing Address		Urban			1		
4	0		Suburban	Male		4		
	Billing Address		Urban			2		
5	Billing Address							
6	Billing Address		Suburban			3		
7	Billing Address		Rural			5		
8	Billing Address		Urban	Male		1		
9	Billing Address	5	Suburban	Female		3		
		h	.£:				£ \	
	prev_payment_meth		-	Electronics		_	_	
0			200 150			1	OR123	
1	-	PayPal			othing	2	OR456	
2	Debit Card		300 50	Electronics		3	OR789	
3	•	PayPal		Clothing		4	OR101	
4	Credit Card		180	Electronics		5	OR202	
5	PayPal		120	Clothing		6 7	OR303	
6	Debit Card		250		Electronics		OR404	
7	PayPal		450	Clothing		8 9	OR505	
8	Credit Card		75		Electronics		OR606	
9	Debit Card	d	200	Clo	othing	10	OR707	
_	shipping tax	item_id		quantity		unit_pr		
0	10.0 5.00	1	1	2			25	
1	7.0 3.50	2	1	3	Product B		15	
2	12.0 6.00	3	2	1	Product C		20	
3	8.0 4.00	4	2	2	Product D		10	
4	15.0 7.50	5	3	3	Product E		30	
5	6.0 3.00	6	3	1	Product F		40	
6	9.0 4.50	7	4	2	Product G		15	
7	11.0 5.50	8	4	1	Product H		50	
8	7.5 3.75	9	5	2	Product I		35	
9	13.0 6.50	10	5	4	Product J		12	
	-	pping_add:	r_id buyer_i		line1		ine2 \	
0	Item A		1		23 Main St	_	t 4B	
1	Item B	2		2 456 Elm Rd		Unit 202		
2	Item C	3		3 789 Oak Ave		Suite 5		
3	Item D	Item D 4		4 101	4 101 Maple St		NaN	
4	Item E		5	5 20	02 Pine Rd	Apartment 10		
5	Item F		6	1 303 Cedar St		NaN		
6	Item G		7	2 404	4 Birch Ln	Uni	t 15	
7	Item H		8	3 5	505 Elm St		NaN	
8	Item I		9	4 606 Oak Rd NaN		NaN		
9	Item J		10	5 707	Maple Ave		NaN	
					_			

city state zip

```
0
                                 10001
                New York
                             NY
       1
             Los Angeles
                                 90001
                             CA
       2
                 Chicago
                                 60601
       3
                 Houston
                             TX
                                 77002
       4
                   Miami
                             FL
                                 33101
       5
                 Seattle
                                 98101
                             WA
       6
                  Boston
                             MA
                                  2201
       7
                  Denver
                                 80201
                             CO
       8
                 Atlanta
                                 30301
                             GA
       9
          San Francisco
                             CA
                                 94101
[183]: stats[['name1', 'name2']]
[183]:
             name1
                       name2
       0
              John
                          Doe
       1
              Jane
                        Smith
       2
          Michael
                     Johnson
       3
             Emily
                    Williams
       4
             {\tt David}
                        Brown
       5
             Sarah
                        Jones
            Robert
       6
                      Miller
       7
              Lisa
                       Davis
          William
                      Taylor
       8
       9
            Olivia
                   Anderson
[184]: stats[5:9][['name1' , 'STORE_NAME']]
[184]:
             name1 STORE_NAME
       5
             Sarah
                      Store F
       6
            Robert
                      Store G
       7
              Lisa
                      Store H
                      Store I
          William
[185]:
      Result=stats['AMOUNT*2']=stats.AMOUNT*2
[186]:
       stats['AMOUNT']
[186]: 0
             100.00
       1
             200.50
       2
              50.25
       3
             300.75
       4
             150.50
       5
             75.00
       6
             500.25
       7
             250.75
       8
             120.00
       9
             350.25
```

Name: AMOUNT, dtype: float64

```
[187]: Result
[187]: 0
              200.0
       1
              401.0
       2
              100.5
       3
              601.5
       4
              301.0
       5
              150.0
       6
             1000.5
       7
             501.5
       8
             240.0
       9
             700.5
       Name: AMOUNT, dtype: float64
[188]:
      stats
[188]:
         api_key_PK
                                    logo_url_data closed_status
       0
              abc123
                       https://example.com/logo1
                                                                  0
       1
                       https://example.com/logo2
             xyz789
                                                                  1
       2
             mno456
                       https://example.com/logo3
                                                                  0
       3
                       https://example.com/logo4
             pqr789
                                                                  1
       4
             lmn123
                       https://example.com/logo5
                                                                  0
       5
             efg456
                       https://example.com/logo6
                                                                  1
       6
             hij789
                       https://example.com/logo7
                                                                  0
       7
                       https://example.com/logo8
             xyz123
                                                                  1
       8
             uvw456
                       https://example.com/logo9
                                                                  0
       9
             rst789
                      https://example.com/logo10
                                                                  1
                             metadata_data PAYLOAD_ID
                                                          AMOUNT CURRENCY STORE NAME
       0
                                                                       USD
                                                                               Store A
                                                          100.00
       1
                     {\key\": \"value\"}"
                                                          200.50
                                                                       EUR
                                                                               Store B
       2
             {\key\": \"another_value\"}"
                                                       3
                                                           50.25
                                                                       GBP
                                                                               Store C
       3
          {\key\": \"different_value\"}"
                                                          300.75
                                                                       USD
                                                                               Store D
                                                       4
       4
                                                       5
                                                          150.50
                                                                       EUR
                                                                               Store E
                                         {}
       5
                 {\key\": \"new_value\"}"
                                                           75.00
                                                                       GBP
                                                                               Store F
                                                       6
       6
                                         {}
                                                       7
                                                          500.25
                                                                       USD
                                                                               Store G
       7
                                                          250.75
              {\key\": \"unique_value\"}"
                                                       8
                                                                       EUR
                                                                               Store H
       8
              {\key\": \"sample_value\"}"
                                                       9
                                                          120.00
                                                                       GBP
                                                                               Store I
       9
                                         {}
                                                      10
                                                          350.25
                                                                       USD
                                                                               Store J
          BUYER_ID
                     ORDER_ID
                                    DESCRIPTION METADATA
                                                           buyer_id
       0
                  1
                           101
                                  First payload
                                                    Meta 1
                                                                    1
                  2
                                                                    2
       1
                           102
                                 Second payload
                                                    Meta 2
       2
                  3
                           103
                                  Third payload
                                                    Meta 3
                                                                    3
       3
                  4
                                 Fourth payload
                                                    Meta 4
                                                                    4
                           104
```

```
4
          5
                   105
                           Fifth payload
                                             Meta 5
                                                             5
5
           6
                                             Meta 6
                                                             6
                   106
                           Sixth payload
           7
                                                             7
6
                   107
                         Seventh payload
                                             Meta 7
7
                                             Meta 8
           8
                   108
                          Eighth payload
                                                             8
8
          9
                   109
                           Ninth payload
                                             Meta 9
                                                             9
9
         10
                   110
                           Tenth payload
                                           Meta 10
                                                            10
                  Email
                            name1
                                       name2
                                                    phone
                                                                    dob
                                                                         \
    buyer1@example.com
                             John
                                         Doe
                                               1234567890
                                                             5/15/1990
0
1
    buyer2@example.com
                             Jane
                                       Smith
                                               9876543210
                                                            10/22/1985
2
    buyer3@example.com
                          Michael
                                     Johnson
                                               5551234567
                                                             3/10/1978
3
    buyer4@example.com
                            Emily
                                    Williams
                                               8889876543
                                                             12/1/1995
4
    buyer5@example.com
                            David
                                       Brown
                                              4445678901
                                                              7/8/1982
5
    buyer6@example.com
                            Sarah
                                       Jones
                                               3332345678
                                                             9/25/1998
6
    buyer7@example.com
                           Robert
                                      Miller
                                               2223456789
                                                            11/12/1972
7
    buyer8@example.com
                             Lisa
                                       Davis
                                               7774567890
                                                             6/18/1989
    buyer9@example.com
                                      Taylor
8
                          William
                                               6663456789
                                                             4/30/1993
   buyer10@example.com
                                    Anderson
                                               1112345678
                                                              2/5/2000
                           Olivia
   buyer_data_id
                   buyer_id.1
                                user_id
                                          age age_platform account_reg_date
0
                                     123
                                                    Android
                                                                     8/15/2015
                             1
                                           31
                2
1
                             2
                                     456
                                           38
                                                         iOS
                                                                     3/22/2018
2
                3
                             3
                                     789
                                           45
                                                    Android
                                                                     12/5/2012
                4
3
                             4
                                           29
                                     101
                                                         iOS
                                                                     7/20/2020
4
                5
                             5
                                     202
                                           41
                                                                     4/18/2017
                                                    Android
5
                6
                             1
                                     303
                                           26
                                                         iOS
                                                                    10/10/2019
                7
                             2
6
                                     404
                                           29
                                                    Android
                                                                     2/28/2016
7
                8
                             3
                                     505
                                           56
                                                         iOS
                                                                     7/15/2013
                             4
8
                9
                                     606
                                           33
                                                    Android
                                                                      4/3/2021
9
               10
                             5
                                     707
                                            28
                                                                      9/9/2018
                                                         iOS
   days_since_1st_tx
                              order_count
                                             last_order_amt
                                                              last_order_at
                         ltv
                         500
0
                                                          50
                                                                         NaN
                  120
                                        10
                                                          75
                         800
                                        15
                                                                         NaN
1
                   60
2
                  180
                        1000
                                        20
                                                         100
                                                                         NaN
3
                   30
                         300
                                         5
                                                          30
                                                                         NaN
4
                   90
                         700
                                        12
                                                          80
                                                                         NaN
5
                   45
                         400
                                         8
                                                          40
                                                                         NaN
                                        18
6
                  150
                         900
                                                          90
                                                                         NaN
7
                  300
                        1200
                                        24
                                                         120
                                                                         NaN
8
                   15
                         200
                                         4
                                                                         NaN
                                                          20
9
                         600
                   75
                                        14
                                                          70
                                                                         NaN
  last_order_date order_amt_last3m
                                        order_count_last3m
                                                              additional_ship_ad
0
        6/28/2023
                                   300
                                                              Shipping Address 1
1
         7/8/2023
                                   200
                                                              Shipping Address 2
2
        6/12/2023
                                   350
                                                              Shipping Address 3
```

```
3
         7/2/2023
                                 150
                                                         3 Shipping Address 4
4
        6/18/2023
                                 250
                                                         6 Shipping Address 5
5
         7/6/2023
                                 180
                                                           Shipping Address 1
6
                                                            Shipping Address 2
        6/22/2023
                                 300
7
        7/12/2023
                                 400
                                                           Shipping Address 3
8
        6/28/2023
                                 100
                                                         2 Shipping Address 4
9
         7/3/2023
                                 220
                                                         5 Shipping Address 5
     billing_address delivery_locn_type
                                           gender
                                                   subscription count
  Billing Address 1
                                   Urban
                                             Male
1 Billing Address 2
                                Suburban Female
                                                                     5
2 Billing Address 3
                                   Rural
                                             Male
                                                                     2
3 Billing Address 4
                                   Urban Female
                                                                     1
4 Billing Address 5
                                Suburban
                                             Male
                                                                     4
5 Billing Address 1
                                                                     2
                                   Urban Female
6 Billing Address 2
                                                                     3
                                Suburban
                                             Male
                                                                     5
7 Billing Address 3
                                   Rural
                                          Female
8 Billing Address 4
                                             Male
                                                                     1
                                   Urban
9 Billing Address 5
                                                                     3
                                Suburban Female
  prev_payment_meth number_of_points order_item_categ order_id order_ref
0
        Credit Card
                                   200
                                             Electronics
                                                                  1
                                                                        OR123
1
             PayPal
                                   150
                                                                  2
                                                                        OR456
                                                Clothing
                                                                  3
2
         Debit Card
                                   300
                                                                        OR789
                                             Electronics
3
             PayPal
                                    50
                                                Clothing
                                                                  4
                                                                        OR101
4
        Credit Card
                                   180
                                             Electronics
                                                                  5
                                                                        OR202
5
             PayPal
                                   120
                                                Clothing
                                                                  6
                                                                        OR303
6
         Debit Card
                                   250
                                             Electronics
                                                                  7
                                                                        OR404
7
             PayPal
                                   450
                                                Clothing
                                                                  8
                                                                        OR505
        Credit Card
                                    75
                                             Electronics
                                                                  9
                                                                        OR606
8
9
         Debit Card
                                   200
                                                                        OR707
                                                Clothing
                                                                 10
                             order_id.1
                                          quantity
   shipping
              tax
                    item_id
                                                        title
                                                                unit_price
0
       10.0
             5.00
                          1
                                       1
                                                   Product A
                                                                        25
                          2
1
        7.0
             3.50
                                       1
                                                    Product B
                                                                        15
2
       12.0 6.00
                          3
                                       2
                                                 1
                                                    Product C
                                                                        20
3
        8.0 4.00
                          4
                                       2
                                                 2 Product D
                                                                        10
                                                 3 Product E
4
       15.0 7.50
                          5
                                       3
                                                                        30
5
        6.0 3.00
                          6
                                       3
                                                 1 Product F
                                                                        40
6
        9.0 4.50
                          7
                                       4
                                                 2 Product G
                                                                        15
7
       11.0 5.50
                          8
                                                 1 Product H
                                       4
                                                                        50
                                       5
                                                 2 Product I
8
        7.5 3.75
                          9
                                                                        35
       13.0 6.50
                         10
                                       5
                                                 4 Product J
                                                                        12
  description shipping_addr_id buyer_id.2
                                                       line1
                                                                      line2
0
       Item A
                                                 123 Main St
                                                                     Apt 4B
                               1
                                            1
                               2
1
       Item B
                                            2
                                                  456 Elm Rd
                                                                   Unit 202
```

```
3
               Item D
                                        4
                                                     4
                                                          101 Maple St
                                                                                   NaN
       4
               Item E
                                        5
                                                     5
                                                           202 Pine Rd
                                                                         Apartment 10
       5
               Item F
                                        6
                                                     1
                                                          303 Cedar St
                                                                                   NaN
       6
               Item G
                                        7
                                                     2
                                                          404 Birch Ln
                                                                               Unit 15
       7
               Item H
                                                     3
                                                            505 Elm St
                                        8
                                                                                   NaN
       8
               Item I
                                        9
                                                     4
                                                            606 Oak Rd
                                                                                   NaN
       9
               Item J
                                       10
                                                         707 Maple Ave
                                                                                   NaN
                                         AMOUNT*2
                    city state
                                    zip
       0
                                  10001
                New York
                             NY
                                             200.0
       1
            Los Angeles
                             CA
                                  90001
                                             401.0
       2
                 Chicago
                             ΙL
                                  60601
                                             100.5
       3
                 Houston
                             TX
                                 77002
                                             601.5
       4
                             FL
                   Miami
                                  33101
                                             301.0
       5
                 Seattle
                             WA
                                 98101
                                             150.0
       6
                  Boston
                             MA
                                   2201
                                            1000.5
       7
                  Denver
                             CO
                                 80201
                                             501.5
       8
                 Atlanta
                             GA
                                  30301
                                             240.0
          San Francisco
                             CA
                                 94101
                                             700.5
       stats['AMOUNT*3']=stats.AMOUNT*3
[190]:
       stats
                                     logo_url_data
[190]:
         api_key_PK
                                                     closed_status
                                                                      \
              abc123
                        https://example.com/logo1
       0
                        https://example.com/logo2
       1
              xyz789
                                                                   1
       2
              mno456
                        https://example.com/logo3
                                                                   0
       3
                        https://example.com/logo4
              pqr789
                                                                   1
       4
              lmn123
                        https://example.com/logo5
                                                                   0
       5
                        https://example.com/logo6
              efg456
                                                                   1
       6
                        https://example.com/logo7
                                                                   0
              hij789
       7
              xyz123
                        https://example.com/logo8
                                                                   1
       8
                        https://example.com/logo9
              uvw456
                                                                   0
       9
              rst789
                      https://example.com/logo10
                                                           AMOUNT CURRENCY STORE_NAME
                             metadata_data PAYLOAD_ID
       0
                                         {}
                                                        1
                                                           100.00
                                                                        USD
                                                                                Store A
       1
                      {\key\": \"value\"}"
                                                        2
                                                           200.50
                                                                        EUR
                                                                                Store B
       2
             {\key\": \"another_value\"}"
                                                                                Store C
                                                        3
                                                            50.25
                                                                        GBP
       3
           {\key\": \"different_value\"}"
                                                        4
                                                           300.75
                                                                        USD
                                                                                Store D
                                                                                Store E
       4
                                                       5
                                                           150.50
                                                                        EUR
       5
                 {\key\": \"new_value\"}"
                                                        6
                                                            75.00
                                                                        GBP
                                                                                Store F
       6
                                                           500.25
                                                                        USD
                                                                                Store G
                                         {}
                                                       7
       7
              {\key\": \"unique_value\"}"
                                                       8
                                                           250.75
                                                                        EUR
                                                                                Store H
              {\key\": \"sample_value\"}"
       8
                                                           120.00
                                                                        GBP
                                                                                Store I
```

3

3

789 Oak Ave

Suite 5

2

Item C

9 {} 10 350.25	USD Store J
BUYER_ID ORDER_ID DESCRIPTION METADATA buyer_id	\
0 1 101 First payload Meta 1 1	
1 2 102 Second payload Meta 2 2	
2 3 103 Third payload Meta 3 3	
3 4 104 Fourth payload Meta 4 4	
4 5 105 Fifth payload Meta 5 5	
5 6 106 Sixth payload Meta 6 6	
6 7 107 Seventh payload Meta 7 7	
7 8 108 Eighth payload Meta 8 8	
8 9 109 Ninth payload Meta 9 9	
9 10 110 Tenth payload Meta 10 10	
Email name1 name2 phone	dob \
J I	15/1990
•	22/1985
· ·	10/1978
	/1/1995
•	/8/1982
J I	25/1998
•	12/1972
•	18/1989
·	30/1993
9 buyer10@example.com Olivia Anderson 1112345678 2/	/5/2000
buyer_data_id buyer_id.1 user_id age age_platform acc	count_reg_date '
0 1 1 123 31 Android	8/15/2015
1 2 2 456 38 iOS	3/22/2018
2 3 3 789 45 Android	0,,
3 4 4 101 29 iOS	12/5/2012
A	
4 5 5 202 41 Android	12/5/2012
5 5 202 41 Android 5 6 1 303 26 iOS	12/5/2012 7/20/2020
	12/5/2012 7/20/2020 4/18/2017
5 6 1 303 26 iOS	12/5/2012 7/20/2020 4/18/2017 10/10/2019
5 6 1 303 26 iOS 6 7 2 404 29 Android	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016
5 6 1 303 26 iOS 6 7 2 404 29 Android 7 8 3 505 56 iOS	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013
5 6 1 303 26 iOS 6 7 2 404 29 Android 7 8 3 505 56 iOS 8 9 4 606 33 Android 9 10 5 707 28 iOS	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018
5 6 1 303 26 iOS 6 7 2 404 29 Android 7 8 3 505 56 iOS 8 9 4 606 33 Android 9 10 5 707 28 iOS days_since_1st_tx ltv order_count last_order_amt last_order_amt	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018
5 6 1 303 26 iOS 6 7 2 404 29 Android 7 8 3 505 56 iOS 8 9 4 606 33 Android 9 10 5 707 28 iOS days_since_1st_tx 1tv order_count last_order_amt last_order_amt 0 120 500 10 50	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018 ast_order_at \
5 6 1 303 26 i0S 6 7 2 404 29 Android 7 8 3 505 56 i0S 8 9 4 606 33 Android 9 10 5 707 28 i0S days_since_1st_tx 1tv order_count last_order_amt last_order_amt last_order_amt last_order_amt 0 120 500 10 50 50 1 60 800 15 75	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018 ast_order_at \ NaN NaN
5 6 1 303 26 i0S 6 7 2 404 29 Android 7 8 3 505 56 i0S 8 9 4 606 33 Android 9 10 5 707 28 i0S days_since_1st_tx 1tv order_count last_order_amt last_or	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018 ast_order_at \ NaN NaN
5 6 1 303 26 iOS 6 7 2 404 29 Android 7 8 3 505 56 iOS 8 9 4 606 33 Android 9 10 5 707 28 iOS 0 120 500 10 50 1 60 800 15 75 2 180 1000 20 100 3 30 30 5 30	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018 ast_order_at \ NaN NaN NaN
5 6 1 303 26 i0S 6 7 2 404 29 Android 7 8 3 505 56 i0S 8 9 4 606 33 Android 9 10 5 707 28 i0S 0 120 500 10 50 10 1 60 800 15 75 75 2 180 1000 20 100 3 30 300 5 30 4 90 700 12 80	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018 ast_order_at \ NaN NaN NaN NaN NaN NaN NaN
5 6 1 303 26 iOS 6 7 2 404 29 Android 7 8 3 505 56 iOS 8 9 4 606 33 Android 9 10 5 707 28 iOS 0 120 500 10 50 1 60 800 15 75 2 180 1000 20 100 3 30 30 5 30	12/5/2012 7/20/2020 4/18/2017 10/10/2019 2/28/2016 7/15/2013 4/3/2021 9/9/2018 ast_order_at \ NaN NaN NaN

```
8
                   15
                        200
                                        4
                                                         20
                                                                        NaN
9
                   75
                        600
                                                         70
                                        14
                                                                        NaN
  last_order_date
                   order_amt_last3m
                                       order_count_last3m
                                                             additional_ship_ad
0
        6/28/2023
                                                             Shipping Address 1
                                  200
1
         7/8/2023
                                                             Shipping Address 2
2
        6/12/2023
                                  350
                                                             Shipping Address 3
                                                             Shipping Address 4
3
         7/2/2023
                                  150
4
                                  250
                                                             Shipping Address 5
        6/18/2023
5
                                                             Shipping Address 1
         7/6/2023
                                  180
6
                                                             Shipping Address 2
        6/22/2023
                                  300
7
        7/12/2023
                                  400
                                                             Shipping Address 3
8
        6/28/2023
                                  100
                                                             Shipping Address 4
9
         7/3/2023
                                  220
                                                             Shipping Address 5
     billing_address delivery_locn_type
                                            gender
                                                    subscription_count
                                                                       3
   Billing Address 1
                                    Urban
                                              Male
   Billing Address 2
                                            Female
                                                                       5
                                 Suburban
                                                                       2
2 Billing Address 3
                                    Rural
                                              Male
3 Billing Address 4
                                    Urban
                                           Female
                                                                       1
4 Billing Address 5
                                                                       4
                                 Suburban
                                              Male
5 Billing Address 1
                                                                       2
                                    Urban Female
6 Billing Address 2
                                              Male
                                                                       3
                                 Suburban
                                                                       5
7 Billing Address 3
                                           Female
                                    Rural
8 Billing Address 4
                                    Urban
                                              Male
                                                                       1
                                                                       3
9 Billing Address 5
                                 Suburban Female
  prev_payment_meth number_of_points order_item_categ order_id order_ref
0
        Credit Card
                                    200
                                              Electronics
                                                                    1
                                                                          OR123
                                    150
                                                                    2
                                                                          OR456
1
             PayPal
                                                 Clothing
2
                                    300
                                                                    3
                                                                          OR789
         Debit Card
                                              Electronics
3
                                                                    4
                                     50
                                                                          OR101
             PayPal
                                                 Clothing
                                                                    5
4
        Credit Card
                                    180
                                              Electronics
                                                                          OR202
                                                                    6
5
             PayPal
                                    120
                                                 Clothing
                                                                          OR303
                                              Electronics
                                                                    7
6
         Debit Card
                                    250
                                                                          OR404
7
             PayPal
                                    450
                                                 Clothing
                                                                    8
                                                                          OR505
8
        Credit Card
                                     75
                                              Electronics
                                                                    9
                                                                          OR606
9
         Debit Card
                                    200
                                                 Clothing
                                                                          OR707
                                                                   10
                              order_id.1
                                           quantity
   shipping
               tax
                    item_id
                                                          title
                                                                 unit_price
0
       10.0
             5.00
                           1
                                                     Product A
1
        7.0
             3.50
                           2
                                        1
                                                     Product B
                                                                          15
2
       12.0 6.00
                           3
                                        2
                                                     Product C
                                                                          20
                                                  1
                                                     Product D
3
        8.0 4.00
                           4
                                       2
                                                  2
                                                                          10
4
       15.0
            7.50
                           5
                                        3
                                                  3
                                                     Product E
                                                                          30
5
        6.0
             3.00
                           6
                                        3
                                                     Product F
                                                                          40
                                                   1
                           7
                                        4
        9.0 4.50
                                                     Product G
                                                                          15
```

```
8
                7.5
                                  9
                                                                                   35
                     3.75
                                                5
                                                              Product I
       9
               13.0
                     6.50
                                 10
                                                5
                                                              Product J
                                                                                   12
                        shipping_addr_id
                                           buyer_id.2
                                                                                 line2
         description
                                                                 line1
       0
               Item A
                                        1
                                                     1
                                                           123 Main St
                                                                                Apt 4B
                                        2
       1
               Item B
                                                     2
                                                            456 Elm Rd
                                                                             Unit 202
       2
               Item C
                                        3
                                                     3
                                                           789 Oak Ave
                                                                              Suite 5
                                        4
       3
               Item D
                                                     4
                                                          101 Maple St
                                                                                   NaN
       4
               Item E
                                        5
                                                     5
                                                           202 Pine Rd
                                                                         Apartment 10
               Item F
       5
                                        6
                                                     1
                                                          303 Cedar St
                                                                                   NaN
       6
               Item G
                                        7
                                                     2
                                                          404 Birch Ln
                                                                              Unit 15
       7
               Item H
                                        8
                                                     3
                                                            505 Elm St
                                                                                   NaN
       8
               Item I
                                        9
                                                     4
                                                            606 Oak Rd
                                                                                   NaN
       9
               Item J
                                       10
                                                        707 Maple Ave
                                                                                   NaN
                                         AMOUNT*2
                                                    AMOUNT*3
                    city state
                                    zip
       0
                                 10001
                                             200.0
                                                      300.00
                New York
                             NY
       1
             Los Angeles
                             CA
                                 90001
                                             401.0
                                                      601.50
       2
                 Chicago
                             IL
                                 60601
                                             100.5
                                                      150.75
       3
                             TX
                                 77002
                                            601.5
                 Houston
                                                      902.25
       4
                   Miami
                             FL
                                 33101
                                            301.0
                                                      451.50
       5
                 Seattle
                             WA
                                 98101
                                             150.0
                                                      225.00
       6
                                  2201
                                            1000.5
                                                     1500.75
                  Boston
                             MA
       7
                  Denver
                             CO
                                 80201
                                            501.5
                                                      752.25
       8
                 Atlanta
                             GA
                                 30301
                                            240.0
                                                      360.00
          San Francisco
                             CA
                                 94101
                                            700.5
                                                     1050.75
[191]: stats.drop('AMOUNT*3',1)
[191]:
                                     logo url data
         api_key_PK
                                                     closed status
              abc123
                        https://example.com/logo1
       0
                        https://example.com/logo2
       1
              xyz789
                                                                   1
       2
              mno456
                        https://example.com/logo3
                                                                   0
       3
                        https://example.com/logo4
              pqr789
                                                                   1
       4
              lmn123
                        https://example.com/logo5
                                                                   0
       5
              efg456
                        https://example.com/logo6
                                                                   1
       6
              hij789
                        https://example.com/logo7
                                                                   0
       7
              xyz123
                        https://example.com/logo8
                                                                   1
                        https://example.com/logo9
       8
              uvw456
                                                                   0
       9
              rst789
                      https://example.com/logo10
                                                                   1
                             metadata_data PAYLOAD_ID
                                                          AMOUNT CURRENCY STORE_NAME
       0
                                                       1
                                                           100.00
                                                                        USD
                                                                                Store A
                                         {}
       1
                      {\key\": \"value\"}"
                                                       2
                                                           200.50
                                                                        EUR
                                                                                Store B
       2
             {\key\": \"another_value\"}"
                                                            50.25
                                                                        GBP
                                                                                Store C
                                                       3
           {\key\": \"different_value\"}"
                                                          300.75
                                                                        USD
                                                                                Store D
```

4

Product H

50

7

11.0

5.50

8

```
4
                                 {}
                                                5
                                                   150.50
                                                                EUR
                                                                        Store E
5
         {\key\": \"new_value\"}"
                                                    75.00
                                                                GBP
                                                                        Store F
                                               6
                                               7
6
                                                   500.25
                                                                USD
                                                                        Store G
7
      {\key\": \"unique_value\"}"
                                                   250.75
                                                                EUR
                                               8
                                                                        Store H
8
      {\key\": \"sample_value\"}"
                                                   120.00
                                                                GBP
                                                                        Store I
                                                                USD
9
                                 {}
                                               10
                                                   350.25
                                                                        Store J
   BUYER_ID
              ORDER_ID
                             DESCRIPTION METADATA
                                                    buyer_id
0
                   101
                                            Meta 1
           1
                           First payload
                                                             1
1
           2
                   102
                          Second payload
                                            Meta 2
                                                             2
2
           3
                           Third payload
                                            Meta 3
                                                             3
                   103
3
           4
                   104
                          Fourth payload
                                            Meta 4
                                                             4
4
           5
                   105
                           Fifth payload
                                            Meta 5
                                                             5
5
           6
                   106
                           Sixth payload
                                            Meta 6
                                                             6
6
          7
                         Seventh payload
                                            Meta 7
                                                             7
                   107
7
          8
                                                             8
                   108
                          Eighth payload
                                            Meta 8
                           Ninth payload
                                                             9
8
          9
                   109
                                            Meta 9
9
         10
                           Tenth payload
                                           Meta 10
                                                            10
                   110
                  Email
                            name1
                                       name2
                                                                   dob
                                                    phone
0
    buyer1@example.com
                                              1234567890
                                                             5/15/1990
                             John
                                         Doe
1
    buyer2@example.com
                             Jane
                                              9876543210
                                                            10/22/1985
                                       Smith
2
    buyer3@example.com
                         Michael
                                     Johnson
                                              5551234567
                                                             3/10/1978
3
    buyer4@example.com
                            Emily
                                   Williams
                                              8889876543
                                                             12/1/1995
4
    buyer5@example.com
                            David
                                       Brown
                                              4445678901
                                                              7/8/1982
5
    buyer6@example.com
                            Sarah
                                       Jones
                                              3332345678
                                                             9/25/1998
    buyer7@example.com
                           Robert
6
                                      Miller
                                              2223456789
                                                            11/12/1972
7
    buyer8@example.com
                             Lisa
                                       Davis
                                              7774567890
                                                             6/18/1989
8
    buyer9@example.com
                          William
                                      Taylor
                                              6663456789
                                                             4/30/1993
   buyer10@example.com
                           Olivia
                                   Anderson
                                              1112345678
                                                              2/5/2000
   buyer_data_id
                   buyer_id.1
                                user_id
                                          age age_platform account_reg_date
0
                                     123
                                           31
                                                    Android
                                                                    8/15/2015
                1
                             1
                2
                             2
                                     456
                                           38
1
                                                        iOS
                                                                    3/22/2018
2
                3
                             3
                                           45
                                     789
                                                    Android
                                                                    12/5/2012
3
                4
                             4
                                     101
                                           29
                                                        iOS
                                                                    7/20/2020
4
                5
                             5
                                     202
                                           41
                                                                    4/18/2017
                                                    Android
5
                6
                             1
                                     303
                                           26
                                                        iOS
                                                                   10/10/2019
6
                7
                             2
                                     404
                                           29
                                                    Android
                                                                    2/28/2016
7
                8
                             3
                                     505
                                           56
                                                        iOS
                                                                    7/15/2013
8
                9
                             4
                                     606
                                           33
                                                                     4/3/2021
                                                    Android
9
               10
                             5
                                     707
                                           28
                                                        iOS
                                                                     9/9/2018
   days_since_1st_tx
                         ltv
                              order_count
                                            last_order_amt
                                                              last_order_at
0
                         500
                                                                         NaN
                  120
                                        10
                                                         50
                         800
                   60
                                        15
                                                         75
                                                                         NaN
1
2
                       1000
                  180
                                        20
                                                        100
                                                                         NaN
```

```
300
3
                   30
                                        5
                                                        30
                                                                       NaN
4
                   90
                        700
                                       12
                                                        80
                                                                       NaN
5
                   45
                        400
                                        8
                                                        40
                                                                       NaN
6
                  150
                        900
                                                        90
                                       18
                                                                       NaN
7
                  300
                       1200
                                       24
                                                       120
                                                                       NaN
                   15
                        200
8
                                        4
                                                        20
                                                                       NaN
9
                   75
                        600
                                       14
                                                        70
                                                                       NaN
                                                             additional ship ad
  last order date order amt last3m
                                       order count last3m
0
        6/28/2023
                                  300
                                                             Shipping Address 1
1
         7/8/2023
                                  200
                                                            Shipping Address 2
2
        6/12/2023
                                  350
                                                             Shipping Address 3
3
         7/2/2023
                                  150
                                                            Shipping Address 4
4
        6/18/2023
                                  250
                                                            Shipping Address 5
5
         7/6/2023
                                                            Shipping Address 1
                                  180
6
                                                             Shipping Address 2
        6/22/2023
                                  300
7
                                                            Shipping Address 3
        7/12/2023
                                  400
8
        6/28/2023
                                  100
                                                            Shipping Address 4
9
         7/3/2023
                                  220
                                                            Shipping Address 5
                                                    subscription_count
     billing_address delivery_locn_type
                                           gender
0 Billing Address 1
                                    Urban
                                             Male
                                                                      3
1 Billing Address 2
                                 Suburban Female
                                                                      5
                                                                      2
2 Billing Address 3
                                    Rural
                                             Male
3 Billing Address 4
                                    Urban Female
                                                                      1
4 Billing Address 5
                                 Suburban
                                             Male
                                                                      4
5 Billing Address 1
                                    Urban Female
                                                                      2
6 Billing Address 2
                                 Suburban
                                             Male
                                                                      3
                                                                      5
7 Billing Address 3
                                    Rural
                                           Female
8 Billing Address 4
                                                                      1
                                    Urban
                                             Male
9 Billing Address 5
                                 Suburban Female
                                                                      3
                      number_of_points order_item_categ order_id order_ref
 prev_payment_meth
                                                                   1
0
        Credit Card
                                    200
                                              Electronics
                                                                         OR123
                                                                   2
             PayPal
                                    150
                                                 Clothing
                                                                         OR456
1
2
         Debit Card
                                    300
                                              Electronics
                                                                   3
                                                                         OR789
3
                                     50
                                                                   4
                                                                         OR101
             PayPal
                                                 Clothing
4
        Credit Card
                                    180
                                             Electronics
                                                                   5
                                                                         OR202
5
             PayPal
                                    120
                                                 Clothing
                                                                   6
                                                                         OR303
6
         Debit Card
                                    250
                                              Electronics
                                                                   7
                                                                         OR404
7
                                    450
                                                 Clothing
                                                                   8
                                                                         OR505
             PayPal
8
        Credit Card
                                     75
                                              Electronics
                                                                   9
                                                                         OR606
9
         Debit Card
                                    200
                                                 Clothing
                                                                  10
                                                                         OR707
                    item_id order_id.1
                                          quantity
                                                         title
                                                                unit_price
   shipping
              tax
       10.0
             5.00
                          1
                                                  2
0
                                       1
                                                     Product A
                                                                         25
                          2
                                       1
1
        7.0 3.50
                                                  3 Product B
                                                                         15
```

```
2
               12.0 6.00
                                                           1 Product C
                                                                                   20
                                  3
                                               2
       3
                8.0 4.00
                                  4
                                                2
                                                           2 Product D
                                                                                   10
       4
               15.0 7.50
                                  5
                                                           3 Product E
                                                3
                                                                                   30
                6.0
       5
                     3.00
                                  6
                                                3
                                                              Product F
                                                                                   40
       6
                9.0 4.50
                                  7
                                                4
                                                           2 Product G
                                                                                   15
       7
               11.0 5.50
                                  8
                                                4
                                                             Product H
                                                                                  50
                                                           2 Product I
       8
                7.5
                     3.75
                                  9
                                               5
                                                                                   35
       9
               13.0 6.50
                                 10
                                                5
                                                           4 Product J
                                                                                   12
         description
                       shipping_addr_id
                                           buyer_id.2
                                                                 line1
                                                                                line2
               Item A
                                                           123 Main St
       0
                                        1
                                                                               Apt 4B
               Item B
                                                            456 Elm Rd
       1
                                        2
                                                     2
                                                                             Unit 202
       2
               Item C
                                        3
                                                     3
                                                           789 Oak Ave
                                                                              Suite 5
       3
               Item D
                                        4
                                                     4
                                                         101 Maple St
                                                                                  NaN
       4
               Item E
                                        5
                                                     5
                                                           202 Pine Rd
                                                                         Apartment 10
       5
               Item F
                                        6
                                                         303 Cedar St
                                                     1
                                                                                   NaN
       6
               Item G
                                        7
                                                     2
                                                                              Unit 15
                                                         404 Birch Ln
       7
               Item H
                                        8
                                                     3
                                                            505 Elm St
                                                                                  NaN
                                                            606 Oak Rd
       8
               Item I
                                        9
                                                     4
                                                                                  NaN
       9
               Item J
                                                        707 Maple Ave
                                       10
                                                                                  NaN
                    city state
                                   zip
                                        AMOUNT*2
       0
                New York
                             NY
                                 10001
                                            200.0
       1
            Los Angeles
                                 90001
                                            401.0
                             CA
       2
                 Chicago
                             IL
                                 60601
                                            100.5
       3
                 Houston
                             TX
                                 77002
                                            601.5
       4
                   Miami
                                 33101
                                            301.0
                             FL
       5
                 Seattle
                             WA
                                 98101
                                            150.0
       6
                                  2201
                                           1000.5
                  Boston
                             MA
       7
                  Denver
                                 80201
                                            501.5
                             CO
       8
                 Atlanta
                             GA
                                 30301
                                            240.0
          San Francisco
                                 94101
                                            700.5
                             CA
[192]: filter=stats.quantity>2
[193]: filter
[193]: 0
            False
       1
              True
       2
            False
       3
            False
             True
       4
            False
       5
       6
            False
       7
            False
       8
            False
       9
              True
```

Name: quantity, dtype: bool

```
[194]: pd.set_option('display.max_columns', None)
[195]: stats[filter]
[195]:
         api_key_PK
                                   logo_url_data closed_status
                                                                          metadata_data
       1
             xyz789
                      https://example.com/logo2
                                                                   {\key\": \"value\"}"
                      https://example.com/logo5
       4
             lmn123
                                                                0
                                                                                      {}
                                                                                      {}
             rst789 https://example.com/logo10
                                                                1
                      AMOUNT CURRENCY STORE NAME
                                                    BUYER ID
                                                              ORDER ID
                                                                            DESCRIPTION
          PAYLOAD_ID
       1
                   2
                       200.50
                                   EUR
                                          Store B
                                                           2
                                                                    102
                                                                         Second payload
                   5
                       150.50
                                   EUR
                                          Store E
                                                           5
                                                                    105
                                                                          Fifth payload
       4
                      350.25
                                   USD
                                                                          Tenth payload
       9
                  10
                                          Store J
                                                          10
                                                                    110
         METADATA buyer_id
                                             Email
                                                     name1
                                                               name2
                                                                            phone
                           2
           Meta 2
                               buyer2@example.com
                                                      Jane
                                                                Smith
                                                                       9876543210
       1
       4
           Meta 5
                           5
                               buyer5@example.com
                                                     David
                                                                Brown
                                                                       4445678901
          Meta 10
                              buyer10@example.com
                          10
                                                    Olivia
                                                            Anderson
                                                                       1112345678
                       buyer_data_id buyer_id.1
                                                   user_id
                                                            age age_platform
                 dob
          10/22/1985
                                   2
                                                2
                                                       456
                                                             38
                                                                          iOS
       1
                                                5
       4
            7/8/1982
                                   5
                                                       202
                                                             41
                                                                      Android
                                                5
       9
            2/5/2000
                                  10
                                                       707
                                                             28
                                                                          iOS
         account_reg_date
                            days_since_1st_tx ltv
                                                     order count
                                                                   last order amt
       1
                3/22/2018
                                            60
                                                800
                                                               15
                                                                               75
       4
                4/18/2017
                                            90
                                                700
                                                               12
                                                                               80
                 9/9/2018
                                            75
                                                600
       9
                                                               14
                                                                               70
          last_order_at last_order_date
                                          order_amt_last3m
                                                             order_count_last3m
                                7/8/2023
       1
                    NaN
                                                        200
                                                                               4
       4
                    NaN
                               6/18/2023
                                                        250
                                                                               6
                                                        220
                                                                               5
       9
                    NaN
                                7/3/2023
          additional_ship_ad
                                 billing_address delivery_locn_type
                                                                       gender
       1 Shipping Address 2
                              Billing Address 2
                                                            Suburban
                                                                       Female
       4 Shipping Address 5
                               Billing Address 5
                                                            Suburban
                                                                         Male
          Shipping Address 5 Billing Address 5
                                                            Suburban Female
          subscription count prev payment meth number of points order item categ
       1
                            5
                                         PayPal
                                                                150
                                                                            Clothing
       4
                            4
                                    Credit Card
                                                                180
                                                                         Electronics
       9
                            3
                                     Debit Card
                                                                200
                                                                            Clothing
          order_id order_ref shipping tax item_id order_id.1 quantity \
```

```
1
                 2
                       OR456
                                   7.0 3.5
                                                    2
                                                                           3
       4
                 5
                       OR202
                                   15.0 7.5
                                                    5
                                                                3
                                                                           3
       9
                10
                       OR707
                                   13.0 6.5
                                                   10
                                                                           4
                     unit_price description
                                              shipping_addr_id buyer_id.2 \
                                      Item B
                                                             2
         Product B
                             15
       4 Product E
                             30
                                      Item E
                                                             5
                                                                          5
       9 Product J
                                                            10
                                                                          5
                             12
                                      Item J
                  line1
                                line2
                                                 city state
                                                                    AMOUNT*2
                                                               zip
       1
             456 Elm Rd
                             Unit 202
                                                             90001
                                                                        401.0
                                                                                 601.50
                                          Los Angeles
                                                         CA
            202 Pine Rd
                        Apartment 10
                                                Miami
                                                             33101
                                                                        301.0
                                                                                 451.50
       9 707 Maple Ave
                                  {\tt NaN}
                                        San Francisco
                                                         CA 94101
                                                                        700.5
                                                                                1050.75
[196]: stats[(stats.quantity>2)&(stats.AMOUNT>151)]
[196]:
         api_key_PK
                                  logo_url_data closed_status
                                                                         metadata data
                      https://example.com/logo2
                                                                  {\key\": \"value\"}"
       1
             xyz789
                                                               1
             rst789 https://example.com/logo10
                                                               1
          PAYLOAD_ID AMOUNT CURRENCY STORE_NAME
                                                             ORDER_ID
                                                                           DESCRIPTION
                                                   BUYER_ID
                   2
                      200.50
                                   EUR
                                          Store B
                                                          2
                                                                   102
                                                                        Second payload
       1
                     350.25
                                  USD
                                                         10
                  10
                                          Store J
                                                                   110
                                                                         Tenth payload
         METADATA buyer id
                                           Email
                                                    name1
                                                              name2
                                                                           phone
          Meta 2
                          2
                              buyer2@example.com
                                                     Jane
                                                              Smith
                                                                     9876543210
       9 Meta 10
                         10
                             buyer10@example.com Olivia Anderson
                                                                     1112345678
                      buyer_data_id buyer_id.1
                                                  user_id age age_platform \
          10/22/1985
                                   2
                                               2
                                                      456
                                                            38
                                                                         iOS
       1
            2/5/2000
                                 10
                                               5
                                                      707
                                                            28
                                                                         iOS
         account_reg_date days_since_1st_tx ltv order_count
                                                                 last_order_amt
                3/22/2018
                                           60
                                               800
                                                                              75
       1
                                                             15
                 9/9/2018
                                           75
                                              600
                                                             14
                                                                              70
       9
          last_order_at last_order_date order_amt_last3m order_count_last3m
                               7/8/2023
       1
                    NaN
                                                       200
       9
                    NaN
                               7/3/2023
                                                       220
                                                                              5
          additional_ship_ad
                                billing_address delivery_locn_type gender
          Shipping Address 2 Billing Address 2
                                                           Suburban Female
                                                           Suburban Female
          Shipping Address 5 Billing Address 5
          subscription_count prev_payment_meth number_of_points order_item_categ \
       1
                                         PayPal
                                                                           Clothing
                           5
                                                              150
       9
                           3
                                    Debit Card
                                                              200
                                                                           Clothing
```

```
order_id order_ref shipping tax item_id order_id.1 quantity \
                           7.0 3.5
     1
                  OR456
                                    2
                           13.0 6.5
     9
            10
                  OR707
                                        10
           title unit_price description shipping_addr_id buyer_id.2 \
     1 Product B
                       15
                             Item B
     9 Product J
                      12
                              Item J
                                               10
                                                          5
              line1
                      line2
                              city state zip AMOUNT*2 AMOUNT*3
         456 Elm Rd Unit 202 Los Angeles CA 90001
                                                    401.0
                                                            601.50
     9 707 Maple Ave
                    NaN San Francisco CA 94101
                                                    700.5
                                                          1050.75
[197]: stats[stats.STORE_NAME=='Store A']
                 logo_url_data closed_status metadata_data \
[197]: api key PK
     0 abc123 https://example.com/logo1
       PAYLOAD_ID AMOUNT CURRENCY STORE_NAME BUYER_ID ORDER_ID DESCRIPTION \
         1 100.0
                        USD Store A 1 101 First payload
                        Email name1 name2 phone
       METADATA buyer_id
                                                                dob \
     0 Meta 1 1 buyer1@example.com John Doe 1234567890 5/15/1990
        buyer_data_id buyer_id.1 user_id age age_platform account_reg_date \
                           1 123 31 Android
        days_since_1st_tx ltv order_count last_order_amt last_order_at \
                  120 500
                            10
       last_order_date order_amt_last3m order_count_last3m additional_ship_ad \
     0 6/28/2023
                               300
                                                5 Shipping Address 1
         billing_address delivery_locn_type gender subscription_count \
     0 Billing Address 1
                                Urban
                                       Male
      prev_payment_meth number_of_points order_item_categ order_id order_ref \
          Credit Card
                                200 Electronics
                                                       1
        shipping tax item_id order_id.1 quantity title unit_price \
           10.0 5.0 1 1 2 Product A
       description shipping_addr_id buyer_id.2 line1 line2 city \
           Item A
                  1 1 23 Main St Apt 4B New York
            zip AMOUNT*2 AMOUNT*3
       state
         NY 10001
                  200.0
                             300.0
```

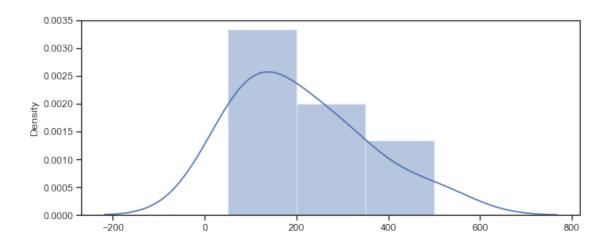
1 .at and .iat

```
[200]: stats
[200]:
         api_key_PK
                                    logo_url_data
                                                    closed_status
                       https://example.com/logo1
       0
              abc123
                                                                 0
       1
              xyz789
                       https://example.com/logo2
                                                                  1
       2
             mno456
                       https://example.com/logo3
                                                                  0
                       https://example.com/logo4
       3
             pqr789
                                                                  1
       4
             lmn123
                       https://example.com/logo5
                                                                 0
       5
                       https://example.com/logo6
              efg456
                                                                  1
       6
             hij789
                       https://example.com/logo7
                                                                  0
       7
                       https://example.com/logo8
             xyz123
                                                                  1
             uvw456
                       https://example.com/logo9
       8
                                                                  0
       9
             rst789 https://example.com/logo10
                                                                  1
                                            PAYLOAD_ID
                                                          AMOUNT CURRENCY STORE NAME
                             metadata_data
       0
                                                                              Store A
                                                       1
                                                          100.00
                                                                       USD
                     {\key\": \"value\"}"
                                                          200.50
       1
                                                                       EUR.
                                                                              Store B
       2
             {\key\": \"another_value\"}"
                                                       3
                                                           50.25
                                                                       GBP
                                                                              Store C
          {\key\": \"different_value\"}"
       3
                                                         300.75
                                                                       USD
                                                                              Store D
                                                      4
       4
                                                      5
                                                          150.50
                                                                       EUR
                                                                              Store E
                 {\key\": \"new_value\"}"
       5
                                                      6
                                                           75.00
                                                                       GBP
                                                                              Store F
       6
                                                          500.25
                                                      7
                                                                       USD
                                                                              Store G
       7
              {\key\": \"unique value\"}"
                                                      8
                                                          250.75
                                                                       EUR
                                                                              Store H
              {\key\": \"sample_value\"}"
                                                                       GBP
       8
                                                      9
                                                          120.00
                                                                              Store I
       9
                                                          350.25
                                                                       USD
                                                                              Store J
                                                      10
          BUYER_ID
                     ORDER_ID
                                    DESCRIPTION METADATA
                                                            buyer_id
       0
                           101
                                  First payload
                                                   Meta 1
                  1
                                                                    1
                  2
                                                                    2
       1
                           102
                                 Second payload
                                                   Meta 2
                  3
                                                                    3
       2
                          103
                                  Third payload
                                                   Meta 3
       3
                  4
                                 Fourth payload
                                                                    4
                          104
                                                   Meta 4
                  5
                                                                    5
       4
                           105
                                  Fifth payload
                                                   Meta 5
       5
                  6
                           106
                                  Sixth payload
                                                   Meta 6
                                                                    6
                  7
                                                                    7
                          107
                                Seventh payload
                                                   Meta 7
```

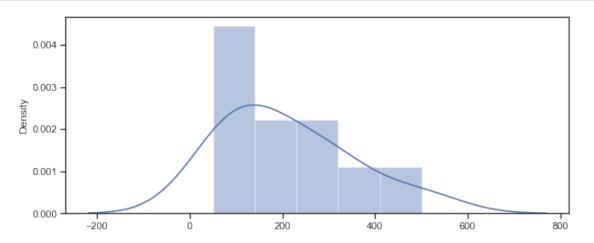
```
7
          8
                   108
                          Eighth payload
                                             Meta 8
                                                             8
8
          9
                           Ninth payload
                                             Meta 9
                                                             9
                   109
9
         10
                   110
                           Tenth payload
                                           Meta 10
                                                            10
                  Email
                            name1
                                       name2
                                                                    dob
                                                    phone
                                                                         \
    buyer1@example.com
                             John
                                               1234567890
                                                             5/15/1990
0
                                         Doe
1
    buyer2@example.com
                             Jane
                                       Smith
                                               9876543210
                                                            10/22/1985
2
    buyer3@example.com
                          Michael
                                     Johnson
                                               5551234567
                                                             3/10/1978
3
    buyer4@example.com
                            Emily
                                    Williams
                                                             12/1/1995
                                               8889876543
4
    buyer5@example.com
                            David
                                       Brown
                                                              7/8/1982
                                               4445678901
5
    buyer6@example.com
                            Sarah
                                       Jones
                                               3332345678
                                                             9/25/1998
6
    buyer7@example.com
                           Robert
                                      Miller
                                               2223456789
                                                            11/12/1972
7
    buyer8@example.com
                             Lisa
                                       Davis
                                               7774567890
                                                             6/18/1989
8
    buyer9@example.com
                          William
                                      Taylor
                                               6663456789
                                                             4/30/1993
   buyer10@example.com
                                    Anderson
                                               1112345678
                                                              2/5/2000
                           Olivia
   buyer_data_id
                   buyer_id.1
                                 user_id
                                          age age_platform account_reg_date
0
                             1
                                     123
                                           31
                                                    Android
                                                                     8/15/2015
                2
1
                             2
                                           38
                                     456
                                                         iOS
                                                                     3/22/2018
                3
                             3
2
                                     789
                                           45
                                                    Android
                                                                     12/5/2012
3
                4
                             4
                                           29
                                                         iOS
                                     101
                                                                     7/20/2020
4
                5
                             5
                                     202
                                           41
                                                    Android
                                                                     4/18/2017
5
                6
                             1
                                     303
                                           26
                                                         iOS
                                                                    10/10/2019
                7
                             2
6
                                     404
                                           29
                                                    Android
                                                                     2/28/2016
7
                8
                             3
                                     505
                                           56
                                                         iOS
                                                                     7/15/2013
                9
                                                    Android
8
                             4
                                     606
                                            33
                                                                      4/3/2021
                             5
9
               10
                                     707
                                           28
                                                         iOS
                                                                      9/9/2018
   days_since_1st_tx
                         ltv
                              order_count
                                             last_order_amt
                                                              last_order_at
0
                         500
                                                                         NaN
                  120
                                        10
                                                          50
1
                   60
                         800
                                        15
                                                          75
                                                                         NaN
2
                  180
                        1000
                                        20
                                                         100
                                                                         NaN
3
                                         5
                   30
                         300
                                                                         NaN
                                                          30
4
                   90
                         700
                                        12
                                                          80
                                                                         NaN
5
                   45
                         400
                                         8
                                                          40
                                                                         NaN
6
                  150
                         900
                                        18
                                                          90
                                                                         NaN
                        1200
7
                  300
                                        24
                                                         120
                                                                         NaN
8
                   15
                         200
                                         4
                                                          20
                                                                         NaN
                   75
9
                         600
                                                          70
                                        14
                                                                         NaN
                                                              additional ship ad
  last_order_date
                   order amt last3m
                                        order count last3m
                                                              Shipping Address 1
0
        6/28/2023
                                   300
1
         7/8/2023
                                   200
                                                              Shipping Address 2
2
        6/12/2023
                                   350
                                                              Shipping Address 3
3
                                   150
                                                              Shipping Address 4
         7/2/2023
4
        6/18/2023
                                   250
                                                              Shipping Address 5
5
                                                              Shipping Address 1
         7/6/2023
                                   180
```

```
300
                                                        7 Shipping Address 2
6
        6/22/2023
7
        7/12/2023
                                                        8 Shipping Address 3
                                 400
8
        6/28/2023
                                 100
                                                         2 Shipping Address 4
9
         7/3/2023
                                 220
                                                         5 Shipping Address 5
     billing_address delivery_locn_type
                                          gender
                                                  subscription_count
0 Billing Address 1
                                   Urban
                                             Male
1 Billing Address 2
                                Suburban Female
                                                                     5
                                                                     2
2 Billing Address 3
                                             Male
                                   Rural
3 Billing Address 4
                                   Urban Female
                                                                     1
4 Billing Address 5
                                             Male
                                                                     4
                                Suburban
5 Billing Address 1
                                   Urban Female
                                                                     2
6 Billing Address 2
                                Suburban
                                             Male
                                                                     3
                                                                     5
7 Billing Address 3
                                   Rural Female
8 Billing Address 4
                                             Male
                                                                     1
                                   Urban
9 Billing Address 5
                                Suburban Female
                                                                     3
                     number_of_points order_item_categ order_id order_ref
  prev_payment_meth
        Credit Card
0
                                    200
                                             Electronics
                                                                  1
                                                                        OR123
                                                                  2
             PayPal
                                    150
                                                Clothing
                                                                        OR456
1
         Debit Card
2
                                    300
                                                                  3
                                                                        OR789
                                             Electronics
3
             PayPal
                                                                  4
                                    50
                                                Clothing
                                                                        OR101
4
        Credit Card
                                             Electronics
                                                                  5
                                                                        OR202
                                   180
5
                                                                  6
             PayPal
                                   120
                                                Clothing
                                                                        OR303
6
         Debit Card
                                   250
                                             Electronics
                                                                  7
                                                                        OR404
7
             PayPal
                                   450
                                                Clothing
                                                                  8
                                                                        OR505
        Credit Card
                                                                        OR606
8
                                    75
                                             Electronics
                                                                  9
9
         Debit Card
                                   200
                                                Clothing
                                                                 10
                                                                        OR707
                   item_id
                             order_id.1
                                          quantity
                                                        title
                                                                unit_price
   shipping
             tax
0
       10.0
             5.00
                          1
                                                   Product A
                                       1
                                                                        25
        7.0
             3.50
                          2
                                       1
                                                 3
                                                   Product B
1
                                                                        15
                                       2
2
       12.0 6.00
                          3
                                                    Product C
                                                                        20
                                                 1
3
        8.0 4.00
                          4
                                       2
                                                 2 Product D
                                                                        10
4
       15.0 7.50
                          5
                                       3
                                                 3 Product E
                                                                        30
5
        6.0 3.00
                          6
                                       3
                                                 1 Product F
                                                                        40
6
        9.0 4.50
                          7
                                       4
                                                 2 Product G
                                                                        15
7
       11.0 5.50
                          8
                                       4
                                                 1 Product H
                                                                        50
8
        7.5 3.75
                          9
                                       5
                                                 2 Product I
                                                                        35
       13.0 6.50
                         10
                                       5
                                                 4 Product J
                                                                        12
  description shipping_addr_id buyer_id.2
                                                       line1
                                                                      line2
                                                 123 Main St
0
       Item A
                               1
                                                                     Apt 4B
                                            1
1
       Ttem B
                               2
                                            2
                                                 456 Elm Rd
                                                                   Unit 202
2
       Item C
                               3
                                            3
                                                 789 Oak Ave
                                                                    Suite 5
3
                               4
                                            4
       Item D
                                                101 Maple St
                                                                        NaN
4
                               5
       Item E
                                                 202 Pine Rd
                                                              Apartment 10
```

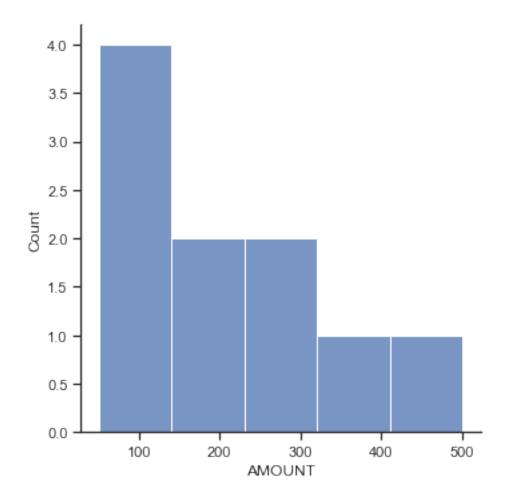
```
5
              Item F
                                      6
                                                       303 Cedar St
                                                                               NaN
       6
              Item G
                                      7
                                                   2
                                                       404 Birch Ln
                                                                           Unit 15
       7
              Item H
                                      8
                                                   3
                                                         505 Elm St
                                                                               NaN
       8
              Item I
                                                         606 Oak Rd
                                      9
                                                   4
                                                                               NaN
       9
              Item J
                                     10
                                                      707 Maple Ave
                                                                               NaN
                                  zip AMOUNT*2
                                                 AMOUNT*3
                   city state
       0
                                10001
               New York
                            NY
                                           200.0
                                                    300.00
                                90001
       1
            Los Angeles
                                           401.0
                                                    601.50
                            CA
       2
                Chicago
                            IL
                                60601
                                           100.5
                                                    150.75
       3
                Houston
                            TX
                                77002
                                           601.5
                                                    902.25
       4
                  Miami
                            FL
                                33101
                                           301.0
                                                    451.50
       5
                Seattle
                            WA
                                98101
                                           150.0
                                                    225.00
       6
                 Boston
                            MA
                                 2201
                                          1000.5
                                                   1500.75
       7
                 Denver
                                80201
                                           501.5
                                                    752.25
                            CO
       8
                Atlanta
                            GA
                                30301
                                           240.0
                                                    360.00
          San Francisco
                                           700.5
                                                   1050.75
                            CA
                                94101
[201]: stats.iat[2,1]
[201]: 'https://example.com/logo3'
[202]: stats.at[2,'logo_url_data']
[202]: 'https://example.com/logo3'
[204]: stats.iat[1,1] # iAt based indexing can only have integer indexers#
[204]: 'https://example.com/logo2'
[205]: stats.at[1,'logo_url_data']
[205]: 'https://example.com/logo2'
          Visualization
[206]: import matplotlib.pyplot as plt
       import seaborn as sns
       import warnings
       warnings.filterwarnings("ignore")
       %matplotlib inline
       plt.rcParams['figure.figsize']=10,4
[207]: sns.distplot([stats.AMOUNT])
       plt.show()
```

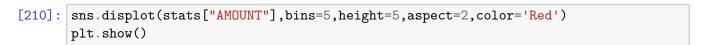


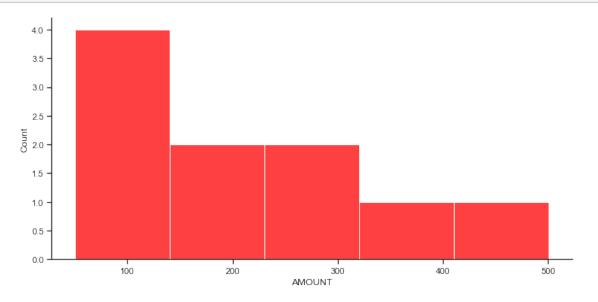
[208]: sns.distplot([stats.AMOUNT],bins=5) plt.show()



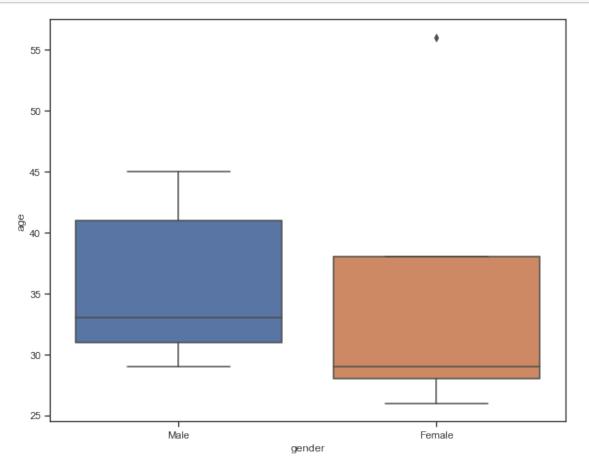
```
[209]: vis1=sns.displot(stats["AMOUNT"],bins=5)
plt.rcParams['figure.figsize']=10,8
plt.show()
```



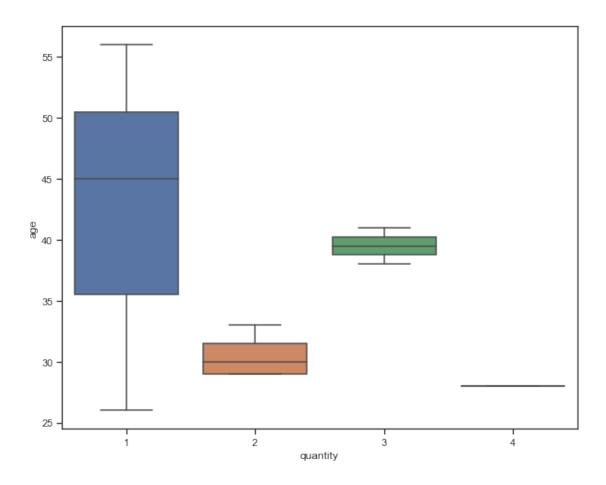




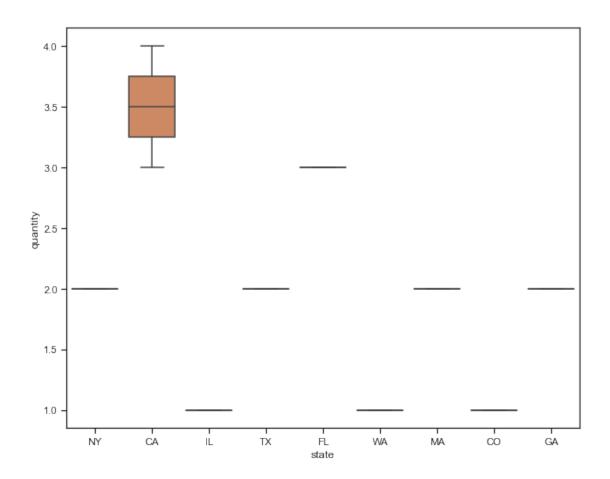
```
[211]: sns.boxplot(data=stats,x="gender",y='age')
plt.show()
```



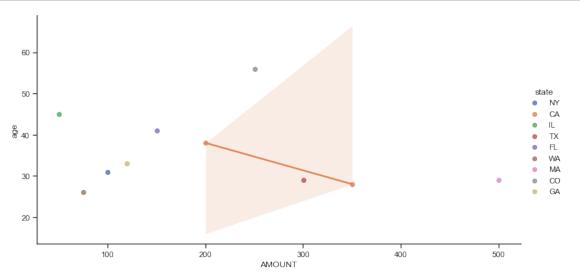
```
[212]: sns.boxplot(data=stats,x="quantity",y='age')
plt.show()
```



```
[213]: sns.boxplot(data=stats,x="state",y='quantity')
plt.show()
```

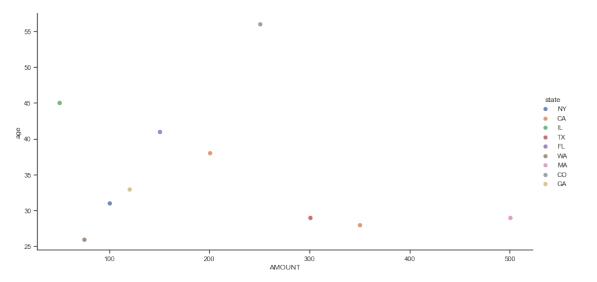






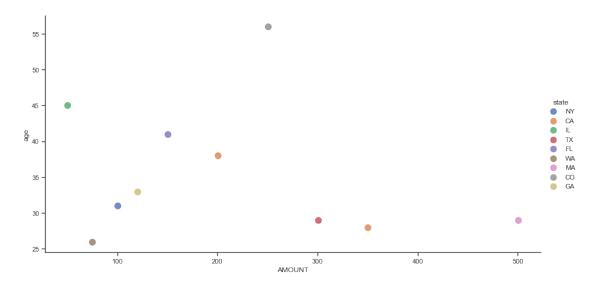
```
[215]: sns.

⇒lmplot(data=stats,x='AMOUNT',y='age',fit_reg=False,hue='state',aspect=2,size=6)
plt.show()
```



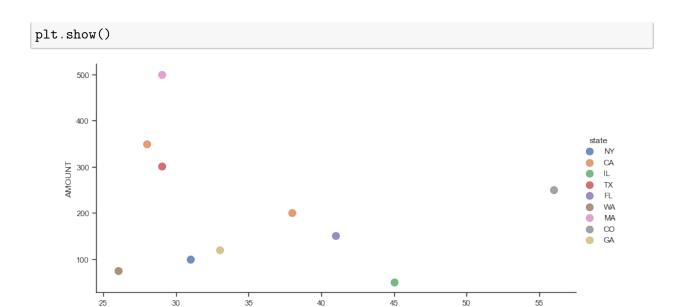
```
[216]: sns.lmplot(data=stats,x='AMOUNT',y='age',fit_reg=False,hue='state',\size=6,scatter_kws={'s':100},aspect=2)
```

[216]: <seaborn.axisgrid.FacetGrid at 0x18dafe57d00>



```
[217]: sns.lmplot(x="age",y="AMOUNT",data=stats,hue='state',scatter_kws={"s":

→100},aspect=2,fit_reg=False)
```



```
[218]:
       stats
[218]:
         api_key_PK
                                    logo_url_data
                                                    closed_status
                       https://example.com/logo1
       0
              abc123
                                                                 0
             xyz789
                       https://example.com/logo2
       1
                                                                  1
       2
             mno456
                       https://example.com/logo3
                                                                 0
       3
                       https://example.com/logo4
             pqr789
                                                                  1
       4
             lmn123
                       https://example.com/logo5
                                                                 0
       5
              efg456
                       https://example.com/logo6
                                                                  1
                       https://example.com/logo7
       6
             hij789
                                                                  0
       7
             xyz123
                       https://example.com/logo8
                                                                  1
                       https://example.com/logo9
       8
             uvw456
                                                                 0
       9
             rst789
                      https://example.com/logo10
                                                                  1
                                                          AMOUNT CURRENCY STORE_NAME
                             metadata_data
                                            PAYLOAD_ID
       0
                                                       1
                                                          100.00
                                                                       USD
                                                                              Store A
                                         {}
                     {\key\": \"value\"}"
                                                       2
                                                          200.50
                                                                              Store B
       1
                                                                       EUR
       2
             {\key\": \"another_value\"}"
                                                       3
                                                           50.25
                                                                       GBP
                                                                              Store C
       3
          {\key\": \"different_value\"}"
                                                      4
                                                          300.75
                                                                       USD
                                                                              Store D
       4
                                                      5
                                                          150.50
                                                                       EUR
                                                                              Store E
                                                                              Store F
       5
                 {\key\": \"new_value\"}"
                                                       6
                                                           75.00
                                                                       GBP
       6
                                         {}
                                                      7
                                                          500.25
                                                                       USD
                                                                              Store G
       7
              {\key\": \"unique_value\"}"
                                                          250.75
                                                                       EUR
                                                                              Store H
                                                      8
       8
              {\key\": \"sample_value\"}"
                                                                       GBP
                                                      9
                                                          120.00
                                                                              Store I
       9
                                        {}
                                                          350.25
                                                                       USD
                                                                              Store J
                                                      10
          BUYER_ID ORDER_ID
                                    DESCRIPTION METADATA buyer_id
```

```
0
          1
                   101
                           First payload
                                             Meta 1
                                                             1
1
           2
                          Second payload
                                             Meta 2
                                                             2
                   102
2
           3
                                             Meta 3
                                                             3
                   103
                           Third payload
3
           4
                          Fourth payload
                                             Meta 4
                                                             4
                    104
4
           5
                    105
                           Fifth payload
                                             Meta 5
                                                             5
           6
                                                             6
5
                    106
                           Sixth payload
                                             Meta 6
6
           7
                   107
                         Seventh payload
                                             Meta 7
                                                             7
7
          8
                          Eighth payload
                                                             8
                   108
                                             Meta 8
          9
                                                             9
8
                           Ninth payload
                                             Meta 9
                    109
9
         10
                   110
                           Tenth payload
                                           Meta 10
                                                            10
                  Email
                            name1
                                       name2
                                                                    dob
                                                    phone
0
    buyer1@example.com
                             John
                                         Doe
                                               1234567890
                                                             5/15/1990
1
    buyer2@example.com
                             Jane
                                       Smith
                                               9876543210
                                                            10/22/1985
2
    buyer3@example.com
                          Michael
                                     Johnson
                                               5551234567
                                                             3/10/1978
3
    buyer4@example.com
                            Emily
                                    Williams
                                               8889876543
                                                             12/1/1995
4
    buyer5@example.com
                            David
                                       Brown
                                               4445678901
                                                              7/8/1982
5
    buyer6@example.com
                            Sarah
                                       Jones
                                               3332345678
                                                             9/25/1998
6
    buyer7@example.com
                           Robert
                                      Miller
                                               2223456789
                                                            11/12/1972
7
    buyer8@example.com
                             Lisa
                                       Davis
                                               7774567890
                                                             6/18/1989
    buyer9@example.com
                                      Taylor
8
                          William
                                               6663456789
                                                             4/30/1993
                           Olivia
   buyer10@example.com
                                    Anderson
                                               1112345678
                                                              2/5/2000
   buyer_data_id buyer_id.1
                                user_id
                                          age age_platform account_reg_date \
0
                             1
                                     123
                                            31
                                                     Android
                                                                     8/15/2015
                2
                             2
                                                                     3/22/2018
1
                                     456
                                            38
                                                         iOS
2
                3
                             3
                                     789
                                            45
                                                     Android
                                                                     12/5/2012
3
                4
                             4
                                     101
                                            29
                                                         iOS
                                                                     7/20/2020
4
                5
                             5
                                     202
                                            41
                                                     Android
                                                                     4/18/2017
5
                6
                             1
                                     303
                                                         iOS
                                                                    10/10/2019
                                            26
6
                7
                             2
                                     404
                                            29
                                                     Android
                                                                     2/28/2016
7
                             3
                8
                                     505
                                            56
                                                         iOS
                                                                     7/15/2013
                9
8
                             4
                                     606
                                            33
                                                     Android
                                                                      4/3/2021
9
               10
                             5
                                     707
                                            28
                                                         iOS
                                                                      9/9/2018
   days_since_1st_tx
                         ltv
                              order_count
                                             last_order_amt
                                                              last_order_at
0
                  120
                         500
                                        10
                                                                         NaN
                                                          50
1
                   60
                         800
                                        15
                                                          75
                                                                         NaN
2
                  180
                        1000
                                        20
                                                         100
                                                                         NaN
3
                   30
                         300
                                         5
                                                          30
                                                                         NaN
4
                   90
                         700
                                        12
                                                          80
                                                                          NaN
5
                                                                          NaN
                   45
                         400
                                         8
                                                          40
6
                  150
                         900
                                        18
                                                          90
                                                                         NaN
7
                  300
                        1200
                                        24
                                                         120
                                                                         NaN
8
                   15
                         200
                                         4
                                                          20
                                                                          NaN
9
                   75
                         600
                                        14
                                                          70
                                                                          NaN
```

```
last_order_date
                   order_amt_last3m
                                       order_count_last3m
                                                            additional_ship_ad
0
        6/28/2023
                                  300
                                                            Shipping Address 1
1
         7/8/2023
                                  200
                                                            Shipping Address 2
2
                                                            Shipping Address 3
        6/12/2023
                                  350
3
         7/2/2023
                                  150
                                                            Shipping Address 4
4
        6/18/2023
                                  250
                                                            Shipping Address 5
5
         7/6/2023
                                                            Shipping Address 1
                                  180
6
                                                            Shipping Address 2
        6/22/2023
                                  300
7
        7/12/2023
                                  400
                                                            Shipping Address 3
8
        6/28/2023
                                  100
                                                            Shipping Address 4
9
         7/3/2023
                                  220
                                                            Shipping Address 5
     billing_address delivery_locn_type
                                           gender
                                                    subscription count
  Billing Address 1
                                    Urban
                                             Male
                                                                      3
1 Billing Address 2
                                 Suburban
                                           Female
                                                                      5
                                                                      2
2 Billing Address 3
                                    Rural
                                             Male
3 Billing Address 4
                                                                      1
                                    Urban
                                           Female
4 Billing Address 5
                                             Male
                                                                      4
                                 Suburban
                                                                      2
5 Billing Address 1
                                    Urban
                                           Female
                                                                      3
6 Billing Address 2
                                 Suburban
                                             Male
7 Billing Address 3
                                           Female
                                                                      5
                                    Rural
8 Billing Address 4
                                    Urban
                                             Male
                                                                      1
9 Billing Address 5
                                 Suburban Female
                                                                      3
  prev_payment_meth number_of_points order_item_categ order_id order_ref
0
        Credit Card
                                    200
                                             Electronics
                                                                   1
                                                                         OR123
                                                                   2
1
             PayPal
                                    150
                                                 Clothing
                                                                         OR456
2
         Debit Card
                                    300
                                             Electronics
                                                                   3
                                                                         OR789
                                                                   4
3
             PayPal
                                     50
                                                 Clothing
                                                                         OR101
4
                                                                   5
                                                                         OR202
        Credit Card
                                    180
                                             Electronics
5
             PayPal
                                    120
                                                                   6
                                                                         OR303
                                                 Clothing
                                                                   7
6
                                    250
         Debit Card
                                             Electronics
                                                                         OR404
7
                                                                   8
                                    450
                                                                         OR505
             PavPal
                                                 Clothing
        Credit Card
                                     75
                                                                   9
8
                                             Electronics
                                                                         OR606
9
         Debit Card
                                    200
                                                 Clothing
                                                                  10
                                                                         OR707
                             order_id.1
                                          quantity
   shipping
              tax
                    item_id
                                                         title
                                                                unit price
0
       10.0
             5.00
                          1
                                       1
                                                  2
                                                    Product A
                                                                         25
        7.0
                          2
                                                  3 Product B
1
            3.50
                                       1
                                                                         15
2
       12.0 6.00
                          3
                                       2
                                                  1
                                                     Product C
                                                                         20
3
        8.0
            4.00
                          4
                                       2
                                                    Product D
                                                                         10
                                                     Product E
4
       15.0 7.50
                          5
                                       3
                                                  3
                                                                         30
5
        6.0 3.00
                          6
                                       3
                                                     Product F
                                                                         40
                                                  1
6
        9.0 4.50
                          7
                                       4
                                                  2 Product G
                                                                         15
7
       11.0 5.50
                          8
                                       4
                                                  1 Product H
                                                                         50
             3.75
                          9
                                                  2 Product I
8
        7.5
                                       5
                                                                         35
                                       5
9
       13.0 6.50
                                                  4 Product J
                         10
                                                                         12
```

```
0
               Item A
                                       1
                                                         123 Main St
                                                                              Apt 4B
                                       2
               Item B
                                                    2
                                                          456 Elm Rd
                                                                           Unit 202
       1
                                                         789 Oak Ave
       2
               Item C
                                       3
                                                    3
                                                                             Suite 5
       3
                                       4
                                                        101 Maple St
               Item D
                                                    4
                                                                                 NaN
       4
              Item E
                                       5
                                                    5
                                                         202 Pine Rd
                                                                       Apartment 10
       5
              Item F
                                       6
                                                        303 Cedar St
                                                    1
                                                                                 NaN
       6
                                       7
                                                    2
               Item G
                                                        404 Birch Ln
                                                                             Unit 15
       7
               Item H
                                       8
                                                    3
                                                          505 Elm St
                                                                                 NaN
              Item I
                                                          606 Oak Rd
       8
                                       9
                                                    4
                                                                                 NaN
                                                       707 Maple Ave
       9
               Item J
                                      10
                                                                                 NaN
                    city state
                                   zip
                                        AMOUNT*2
                                                  AMOUNT*3
       0
                                10001
                                           200.0
                                                     300.00
               New York
                            NY
                                90001
       1
            Los Angeles
                            CA
                                           401.0
                                                     601.50
       2
                Chicago
                            IL
                                60601
                                           100.5
                                                     150.75
       3
                Houston
                            TX
                                77002
                                           601.5
                                                     902.25
       4
                   Miami
                                33101
                                           301.0
                                                     451.50
       5
                Seattle
                            WA
                                98101
                                           150.0
                                                     225.00
       6
                                  2201
                                          1000.5
                                                    1500.75
                  Boston
                            MA
       7
                 Denver
                                80201
                                           501.5
                                                     752.25
                            CO
       8
                Atlanta
                                30301
                                           240.0
                                                     360.00
                            GA
          San Francisco
                                94101
                                           700.5
                                                    1050.75
                            CA
[219]:
      sns.set_theme(style="whitegrid") #ticks
       sns.
        →lmplot(data=stats,x="age",y="AMOUNT",col="state",hue="state",col_wrap=2,ci=None,palette="mu
                  scatter_kws={"s":50,"alpha":1})
       plt.show()
```

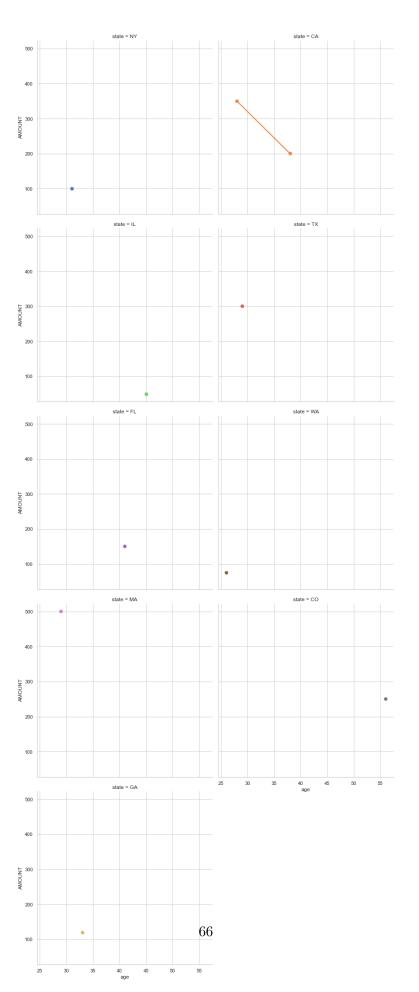
buyer_id.2

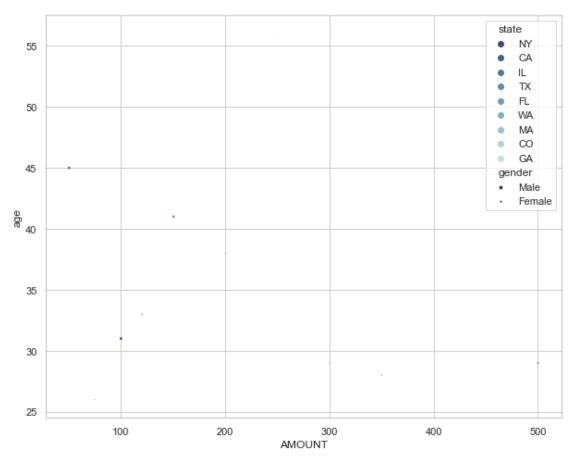
line1

line2 \

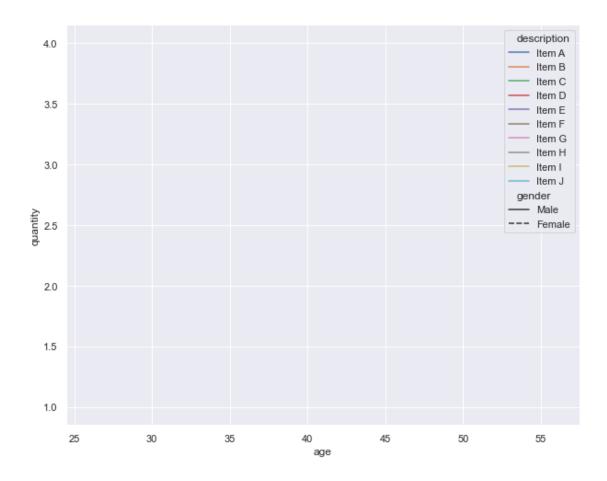
shipping_addr_id

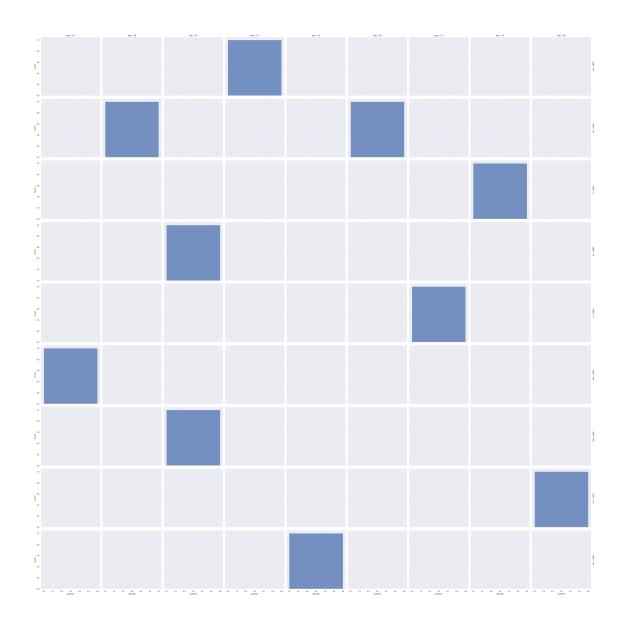
description

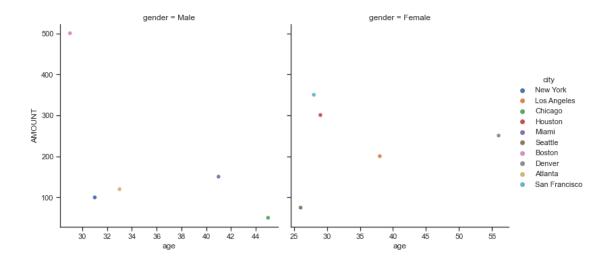




```
[221]: sns.set_theme(style="darkgrid")
sns.lineplot(data=stats,x="age",y="quantity",hue="description",style="gender")
plt.show()
```







[]: