

 Open in Colab

```
In [ ]: import pandas as pd
```

```
In [ ]: df = pd.read_csv('/content/Telecom_customer churn.csv');
```

```
In [ ]: df.head()
```

```
Out[ ]:      rev_Mean  mou_Mean  totmrc_Mean  da_Mean  ovrmou_Mean  ovrrrev_Mean  vceovr_Mean  dat
```

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrrev_Mean	vceovr_Mean	dat
0	23.9975	219.25	22.500	0.2475	0.00	0.0	0.0	
1	57.4925	482.75	37.425	0.2475	22.75	9.1	9.1	
2	16.9900	10.25	16.990	0.0000	0.00	0.0	0.0	
3	38.0000	7.50	38.000	0.0000	0.00	0.0	0.0	
4	55.2300	570.50	71.980	0.0000	0.00	0.0	0.0	

5 rows × 100 columns

```
In [ ]: from google.colab import drive
drive.mount('/content/drive')
```

```
In [ ]: # Check for missing values
missing_values = df.isnull().sum()
print(missing_values)
```

```
rev_Mean      357
mou_Mean      357
totmrc_Mean   357
da_Mean       357
ovrmou_Mean   357
...
kid11_15     1732
kid16_17     1732
creditcd     1732
eqpdays      1
Customer_ID   0
Length: 100, dtype: int64
```

```
In [ ]: df = df.dropna() # Drops rows with any missing values
```

```
In [ ]: # Get numeric columns
numeric_cols = df.select_dtypes(include=['number']).columns
print("Numeric columns:", numeric_cols)
```

```

Numeric columns: Index(['rev_Mean', 'mou_Mean', 'totmrc_Mean', 'da_Mean', 'ovrmou_
Mean',
                        'ovrrev_Mean', 'vceovr_Mean', 'datovr_Mean', 'roam_Mean', 'change_mou',
                        'change_rev', 'drop_vce_Mean', 'drop_dat_Mean', 'blk_vce_Mean',
                        'blk_dat_Mean', 'unan_vce_Mean', 'unan_dat_Mean', 'plcd_vce_Mean',
                        'plcd_dat_Mean', 'recv_vce_Mean', 'recv_sms_Mean', 'comp_vce_Mean',
                        'comp_dat_Mean', 'custcare_Mean', 'ccrndmou_Mean', 'cc_mou_Mean',
                        'inonemin_Mean', 'threeway_Mean', 'mou_cvce_Mean', 'mou_cdat_Mean',
                        'mou_rvce_Mean', 'owylis_vce_Mean', 'mouowylisv_Mean',
                        'iwylis_vce_Mean', 'mouiwyylisv_Mean', 'peak_vce_Mean', 'peak_dat_Mean',
                        'mou_peav_Mean', 'mou_pead_Mean', 'opk_vce_Mean', 'opk_dat_Mean',
                        'mou_opkv_Mean', 'mou_opkd_Mean', 'drop_blk_Mean', 'attempt_Mean',
                        'complete_Mean', 'callfwdv_Mean', 'callwait_Mean', 'churn', 'months',
                        'uniqusubs', 'actvsubs', 'totcalls', 'totmou', 'totrev', 'adjrev',
                        'adjmou', 'adjqty', 'avgrev', 'avgmou', 'avgqty', 'avg3mou', 'avg3qty',
                        'avg3rev', 'avg6mou', 'avg6qty', 'avg6rev', 'hnd_price', 'phones',
                        'models', 'truck', 'rv', 'lor', 'adults', 'income', 'numbcars',
                        'forgntvl', 'eqpdays', 'Customer_ID'],
                        dtype='object')

```

```

In [ ]: outlier_dict = {}

for col in numeric_cols:
    # Calculate Q1 and Q3
    Q1 = df[col].quantile(0.25)
    Q3 = df[col].quantile(0.75)
    IQR = Q3 - Q1

    # Determine bounds for outliers
    lower_bound = Q1 - 1.5 * IQR
    upper_bound = Q3 + 1.5 * IQR

    # Identify outliers
    outliers = df[(df[col] < lower_bound) | (df[col] > upper_bound)]

    if not outliers.empty:
        outlier_dict[col] = outliers

# Display outliers for each column
for col, outliers in outlier_dict.items():
    print(f"Outliers in column '{col}':")
    print(outliers)

```

Outliers in column 'rev_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.9900	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.9900	0.0000	362.250000	72.450000	
123	159.517500	2255.75	82.9900	3.2175	666.500000	66.650000	
127	281.330000	3807.75	182.9375	8.4150	759.000000	88.500000	
178	284.932500	3794.25	75.0000	1.7325	1948.750000	194.875000	
...	
99537	149.220000	2032.00	97.4900	5.4450	234.500000	58.625000	
99641	321.350000	1364.50	69.5850	2.9700	630.500000	248.450000	
99717	197.945000	1118.50	50.0000	5.4450	475.000000	142.500000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	
99872	534.930000	4719.00	10.0000	6.9300	2018.000000	515.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.000	35.4975	-200.50	...	0.0	N	
20	72.450000	0.000	0.0000	-1007.00	...	0.0	Z	
123	66.650000	0.000	0.5850	-2238.75	...	0.0	H	
127	88.425000	0.075	0.0000	5.25	...	0.0	N	
178	194.875000	0.000	0.0000	437.75	...	0.0	N	
...	
99537	58.625000	0.000	0.1600	442.00	...	0.0	U	
99641	199.450000	49.000	0.0000	741.50	...	0.0	G	
99717	142.500000	0.000	0.0000	30.50	...	0.0	N	
99760	163.166667	0.390	0.0000	-1288.00	...	0.0	Z	
99872	485.750000	29.250	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
123	U	U	U	U	U	Y	318.0	
127	U	U	U	U	Y	Y	77.0	
178	U	U	U	Y	U	Y	88.0	
...	
99537	U	U	U	U	U	Y	250.0	
99641	U	Y	Y	U	U	Y	45.0	
99717	U	Y	Y	Y	U	Y	917.0	
99760	U	U	U	U	U	Y	107.0	
99872	U	U	U	U	U	Y	62.0	

Customer_ID

14	1000015
20	1000021
123	1000124
127	1000128
178	1000179
...	...
99537	1099538
99641	1099642
99717	1099718
99760	1099761
99872	1099873

[1702 rows x 100 columns]

Outliers in column 'mou_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.9900	2.2275	249.50	99.8000	
20	172.4400	1978.00	99.9900	0.0000	362.25	72.4500	
84	93.0200	1348.25	75.0000	0.0000	4.75	1.8525	
85	97.5900	1804.00	75.0000	1.4850	85.00	8.5000	
92	72.8100	1306.00	77.8975	0.0000	0.00	0.0000	
...	
99498	141.4825	1850.75	75.0000	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.9900	2.7225	0.00	0.0000	

99537	149.2200	2032.00	97.4900	5.4450	234.50	58.6250
99641	321.3500	1364.50	69.5850	2.9700	630.50	248.4500
99872	534.9300	4719.00	10.0000	6.9300	2018.00	515.0000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500	0.0000	0.0000	-343.00	...	0.0	N	
92	0.000	0.0000	0.0000	-462.00	...	0.0	O	
...	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N	
99537	58.625	0.0000	0.1600	442.00	...	0.0	U	
99641	199.450	49.0000	0.0000	741.50	...	0.0	G	
99872	485.750	29.2500	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
92	U	U	U	U	U	Y	146.0	
...	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	
99641	U	Y	Y	U	U	Y	45.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
92	1000093
...	...
99498	1099499
99509	1099510
99537	1099538
99641	1099642
99872	1099873

[1567 rows x 100 columns]

Outliers in column 'totmrc_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
127	281.3300	3807.75	182.9375	8.4150	759.00	88.5000	
193	173.6675	464.50	159.9900	0.0000	0.75	0.2925	
210	111.6150	1161.00	104.9900	0.0000	31.50	7.8750	
236	124.5150	593.50	101.9250	0.0000	0.00	0.0000	
251	180.1150	496.75	154.9900	0.4950	0.25	0.0975	
...	
98453	210.7100	2421.25	151.2400	2.4750	206.00	41.2500	
98612	153.7700	1441.50	109.9800	0.9900	239.00	47.8000	
98988	126.0000	948.25	119.9900	1.4850	41.50	14.5250	
99297	237.7525	2495.25	154.9900	1.7325	36.00	5.4000	
99509	156.7125	3140.75	159.9900	2.7225	0.00	0.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
127	88.425	0.0750	0.0000	5.25	...	0.0	N	
193	0.000	0.2925	0.0000	-224.50	...	0.0	O	
210	7.875	0.0000	0.0000	-43.00	...	0.0	I	
236	0.000	0.0000	0.0000	133.50	...	0.0	N	
251	0.000	0.0975	21.6250	-449.75	...	0.0	S	

...
98453	41.250	0.0000	0.1725	-22.25	...	0.0	S
98612	47.800	0.0000	0.0000	-992.50	...	0.0	H
98988	14.525	0.0000	0.0000	-8.25	...	0.0	N
99297	5.400	0.0000	0.0975	258.75	...	0.0	J
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
127	U	U	U	U	Y	Y	77.0	
193	U	U	U	U	U	Y	542.0	
210	U	U	U	U	U	Y	299.0	
236	U	U	U	U	U	Y	61.0	
251	U	U	U	U	U	Y	195.0	
...	
98453	U	U	U	U	U	Y	533.0	
98612	U	U	U	U	U	Y	169.0	
98988	U	U	U	U	U	Y	464.0	
99297	U	U	U	U	U	Y	76.0	
99509	U	U	U	U	U	Y	278.0	

	Customer_ID
127	1000128
193	1000194
210	1000211
236	1000237
251	1000252
...	...
98453	1098454
98612	1098613
98988	1098989
99297	1099298
99509	1099510

[536 rows x 100 columns]

Outliers in column 'da_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.500000	84.9900	2.2275	249.5	99.80	
114	113.5225	1807.250000	85.0000	1.9800	102.0	10.20	
123	159.5175	2255.750000	82.9900	3.2175	666.5	66.65	
127	281.3300	3807.750000	182.9375	8.4150	759.0	88.50	
128	97.8275	1669.500000	83.0000	3.7125	0.0	0.00	
...	
99776	52.3100	157.666667	50.0000	2.3100	0.0	0.00	
99849	99.1500	927.500000	70.0000	5.9400	32.0	8.00	
99872	534.9300	4719.000000	10.0000	6.9300	2018.0	515.00	
99875	105.5300	736.000000	44.9900	2.6400	194.0	67.90	
99939	49.3625	187.750000	40.0725	2.9700	18.0	6.32	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forngntvl	\
14	99.800	0.000	35.4975	-200.500000	...	0.0	
114	10.200	0.000	1.0025	-373.250000	...	0.0	
123	66.650	0.000	0.5850	-2238.750000	...	0.0	
127	88.425	0.075	0.0000	5.250000	...	0.0	
128	0.000	0.000	1.2800	240.500000	...	0.0	
...	
99776	0.000	0.000	0.0000	-5.666667	...	1.0	
99849	8.000	0.000	15.2100	-55.500000	...	0.0	
99872	485.750	29.250	0.0000	0.000000	...	0.0	
99875	67.900	0.000	0.0000	272.000000	...	0.0	
99939	6.125	0.195	0.0000	-187.750000	...	0.0	

	ethnic	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	N	U	U	Y	U	U	Y	199.0	
114	N	U	U	U	U	U	Y	387.0	

123	H	U	U	U	U	U	Y	318.0
127	N	U	U	U	U	Y	Y	77.0
128	H	U	U	U	U	U	Y	116.0
...
99776	G	U	Y	Y	U	U	Y	910.0
99849	N	U	U	U	U	U	Y	408.0
99872	N	U	U	U	U	U	Y	62.0
99875	H	U	U	U	U	U	Y	958.0
99939	S	U	U	U	U	U	Y	153.0

Customer_ID	
14	1000015
114	1000115
123	1000124
127	1000128
128	1000129
...	...
99776	1099777
99849	1099850
99872	1099873
99875	1099876
99939	1099940

[3331 rows x 100 columns]

Outliers in column 'ovrmou_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
40	82.162500	660.00	50.00	0.0000	100.750000	30.225000	
48	107.235000	782.00	24.99	0.0000	232.750000	86.117500	
85	97.590000	1804.00	75.00	1.4850	85.000000	8.500000	
...	
99697	69.547500	325.25	34.98	0.7425	110.250000	33.075000	
99717	197.945000	1118.50	50.00	5.4450	475.000000	142.500000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99872	534.930000	4719.00	10.00	6.9300	2018.000000	515.000000	
99875	105.530000	736.00	44.99	2.6400	194.000000	67.900000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forntv1	ethnic	\
14	99.800000	0.00	35.4975	-200.50	...	0.0	N	
20	72.450000	0.00	0.0000	-1007.00	...	0.0	Z	
40	30.225000	0.00	1.9375	-184.00	...	0.0	N	
48	86.117500	0.00	0.0000	-258.00	...	0.0	N	
85	8.500000	0.00	0.0000	-343.00	...	0.0	N	
...	
99697	33.075000	0.00	0.0000	25.75	...	0.0	I	
99717	142.500000	0.00	0.0000	30.50	...	0.0	N	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99872	485.750000	29.25	0.0000	0.00	...	0.0	N	
99875	67.900000	0.00	0.0000	272.00	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
40	U	U	U	Y	U	Y	107.0	
48	U	Y	Y	Y	Y	Y	162.0	
85	U	U	U	U	U	Y	175.0	
...	
99697	U	U	U	U	U	Y	980.0	
99717	U	Y	Y	Y	U	Y	917.0	
99760	U	U	U	U	U	Y	107.0	
99872	U	U	U	U	U	Y	62.0	
99875	U	U	U	U	U	Y	958.0	

```

Customer_ID
14      1000015
20      1000021
40      1000041
48      1000049
85      1000086
...
99697   1099698
99717   1099718
99760   1099761
99872   1099873
99875   1099876

```

[3412 rows x 100 columns]

Outliers in column 'ovrrev_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
40	82.162500	660.00	50.00	0.0000	100.750000	30.225000	
48	107.235000	782.00	24.99	0.0000	232.750000	86.117500	
123	159.517500	2255.75	82.99	3.2175	666.500000	66.650000	
...	
99697	69.547500	325.25	34.98	0.7425	110.250000	33.075000	
99717	197.945000	1118.50	50.00	5.4450	475.000000	142.500000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99872	534.930000	4719.00	10.00	6.9300	2018.000000	515.000000	
99875	105.530000	736.00	44.99	2.6400	194.000000	67.900000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.00	35.4975	-200.50	...	0.0	N	
20	72.450000	0.00	0.0000	-1007.00	...	0.0	Z	
40	30.225000	0.00	1.9375	-184.00	...	0.0	N	
48	86.117500	0.00	0.0000	-258.00	...	0.0	N	
123	66.650000	0.00	0.5850	-2238.75	...	0.0	H	
...	
99697	33.075000	0.00	0.0000	25.75	...	0.0	I	
99717	142.500000	0.00	0.0000	30.50	...	0.0	N	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99872	485.750000	29.25	0.0000	0.00	...	0.0	N	
99875	67.900000	0.00	0.0000	272.00	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
40	U	U	U	Y	U	Y	107.0	
48	U	Y	Y	Y	Y	Y	162.0	
123	U	U	U	U	U	Y	318.0	
...	
99697	U	U	U	U	U	Y	980.0	
99717	U	Y	Y	Y	U	Y	917.0	
99760	U	U	U	U	U	Y	107.0	
99872	U	U	U	U	U	Y	62.0	
99875	U	U	U	U	U	Y	958.0	

```

Customer_ID
14      1000015
20      1000021
40      1000041
48      1000049
123     1000124
...
99697   1099698
99717   1099718
99760   1099761

```

99872 1099873
99875 1099876

[3365 rows x 100 columns]

Outliers in column 'vceovr_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
40	82.162500	660.00	50.00	0.0000	100.750000	30.225000	
48	107.235000	782.00	24.99	0.0000	232.750000	86.117500	
123	159.517500	2255.75	82.99	3.2175	666.500000	66.650000	
...	
99697	69.547500	325.25	34.98	0.7425	110.250000	33.075000	
99717	197.945000	1118.50	50.00	5.4450	475.000000	142.500000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99872	534.930000	4719.00	10.00	6.9300	2018.000000	515.000000	
99875	105.530000	736.00	44.99	2.6400	194.000000	67.900000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.00	35.4975	-200.50	...	0.0	N	
20	72.450000	0.00	0.0000	-1007.00	...	0.0	Z	
40	30.225000	0.00	1.9375	-184.00	...	0.0	N	
48	86.117500	0.00	0.0000	-258.00	...	0.0	N	
123	66.650000	0.00	0.5850	-2238.75	...	0.0	H	
...	
99697	33.075000	0.00	0.0000	25.75	...	0.0	I	
99717	142.500000	0.00	0.0000	30.50	...	0.0	N	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99872	485.750000	29.25	0.0000	0.00	...	0.0	N	
99875	67.900000	0.00	0.0000	272.00	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
40	U	U	U	Y	U	Y	107.0	
48	U	Y	Y	Y	Y	Y	162.0	
123	U	U	U	U	U	Y	318.0	
...	
99697	U	U	U	U	U	Y	980.0	
99717	U	Y	Y	Y	U	Y	917.0	
99760	U	U	U	U	U	Y	107.0	
99872	U	U	U	U	U	Y	62.0	
99875	U	U	U	U	U	Y	958.0	

	Customer_ID
14	1000015
20	1000021
40	1000041
48	1000049
123	1000124
...	...
99697	1099698
99717	1099718
99760	1099761
99872	1099873
99875	1099876

[3385 rows x 100 columns]

Outliers in column 'datovr_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
19	50.965000	162.00	69.9900	0.0000	2.500000	0.975000	
39	33.477500	195.50	29.9900	0.0000	0.250000	0.097500	
84	93.020000	1348.25	75.0000	0.0000	4.750000	1.852500	
101	114.132500	1649.75	83.0000	1.7325	51.500000	14.647500	

127	281.330000	3807.75	182.9375	8.4150	759.000000	88.500000
...
99641	321.350000	1364.50	69.5850	2.9700	630.500000	248.450000
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667
99872	534.930000	4719.00	10.0000	6.9300	2018.000000	515.000000
99899	45.260000	149.00	44.4800	0.0000	2.000000	0.780000
99939	49.362500	187.75	40.0725	2.9700	18.000000	6.320000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic \
19	0.000000	0.9750	0.000	-58.00	...	0.0	S
39	0.000000	0.0975	2.565	54.50	...	0.0	J
84	0.000000	1.8525	1.920	-165.25	...	0.0	S
101	1.875000	12.7725	0.000	-176.75	...	0.0	U
127	88.425000	0.0750	0.000	5.25	...	0.0	N
...
99641	199.450000	49.0000	0.000	741.50	...	0.0	G
99760	163.166667	0.3900	0.000	-1288.00	...	0.0	Z
99872	485.750000	29.2500	0.000	0.00	...	0.0	N
99899	0.000000	0.7800	0.000	-86.00	...	0.0	N
99939	6.125000	0.1950	0.000	-187.75	...	0.0	S

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays \
19	U	U	Y	Y	Y	N	253.0
39	U	U	U	Y	U	Y	179.0
84	U	U	U	U	U	Y	10.0
101	U	U	U	U	U	Y	306.0
127	U	U	U	U	Y	Y	77.0
...
99641	U	Y	Y	U	U	Y	45.0
99760	U	U	U	U	U	Y	107.0
99872	U	U	U	U	U	Y	62.0
99899	U	U	U	U	Y	Y	75.0
99939	U	U	U	U	U	Y	153.0

	Customer_ID
19	1000020
39	1000040
84	1000085
101	1000102
127	1000128
...	...
99641	1099642
99760	1099761
99872	1099873
99899	1099900
99939	1099940

[3285 rows x 100 columns]

Outliers in column 'roam_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean \
14	212.5150	1971.500000	84.99	2.2275	249.500000	99.800000
16	63.0175	440.250000	59.98	0.0000	5.750000	1.725000
18	55.2700	1212.750000	49.99	0.7425	0.000000	0.000000
39	33.4775	195.500000	29.99	0.0000	0.250000	0.097500
40	82.1625	660.000000	50.00	0.0000	100.750000	30.225000
...
99496	36.4050	208.000000	30.00	3.9600	0.000000	0.000000
99553	49.7200	155.666667	29.99	0.0000	21.666667	8.666667
99575	17.1925	313.750000	10.00	2.2275	9.750000	3.900000
99580	52.2625	105.250000	50.00	0.7425	0.000000	0.000000
99849	99.1500	927.500000	70.00	5.9400	32.000000	8.000000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic \
14	99.800000	0.0000	35.4975	-200.500000	...	0.0	N

16	1.725000	0.0000	1.3125	-16.250000	...	0.0	N
18	0.000000	0.0000	1.2850	169.250000	...	0.0	N
39	0.000000	0.0975	2.5650	54.500000	...	0.0	J
40	30.225000	0.0000	1.9375	-184.000000	...	0.0	N
...
99496	0.000000	0.0000	2.4450	133.000000	...	0.0	H
99553	8.666667	0.0000	10.8000	-117.666667	...	0.0	N
99575	3.900000	0.0000	1.0650	179.250000	...	0.0	H
99580	0.000000	0.0000	1.5200	-88.250000	...	0.0	N
99849	8.000000	0.0000	15.2100	-55.500000	...	0.0	N

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
16	U	U	U	U	U	Y	530.0	
18	U	U	U	U	U	Y	408.0	
39	U	U	U	Y	U	Y	179.0	
40	U	U	U	Y	U	Y	107.0	
...	
99496	U	U	Y	U	U	Y	379.0	
99553	U	U	U	U	U	Y	834.0	
99575	U	U	U	Y	Y	Y	238.0	
99580	U	U	Y	Y	Y	Y	891.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
14	1000015
16	1000017
18	1000019
39	1000040
40	1000041
...	...
99496	1099497
99553	1099554
99575	1099576
99580	1099581
99849	1099850

[4888 rows x 100 columns]

Outliers in column 'change_mou':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
20	172.440000	1978.00	99.9900	0.0000	362.250000	72.450000	
85	97.590000	1804.00	75.0000	1.4850	85.000000	8.500000	
88	79.595000	828.00	75.0000	0.0000	0.000000	0.000000	
92	72.810000	1306.00	77.8975	0.0000	0.000000	0.000000	
98	103.282500	1376.00	84.9900	0.7425	38.000000	15.200000	
...	
99641	321.350000	1364.50	69.5850	2.9700	630.500000	248.450000	
99674	84.355000	494.50	45.1500	8.9100	22.000000	8.800000	
99721	52.020000	710.25	46.8600	2.7225	0.000000	0.000000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	
99875	105.530000	736.00	44.9900	2.6400	194.000000	67.900000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
20	72.450000	0.00	0.0000	-1007.00	...	0.0	Z	
85	8.500000	0.00	0.0000	-343.00	...	0.0	N	
88	0.000000	0.00	2.1150	299.00	...	0.0	S	
92	0.000000	0.00	0.0000	-462.00	...	0.0	O	
98	15.200000	0.00	7.6625	355.00	...	0.0	N	
...	
99641	199.450000	49.00	0.0000	741.50	...	0.0	G	
99674	8.800000	0.00	0.0000	482.50	...	0.0	U	
99721	0.000000	0.00	0.0000	-396.25	...	0.0	S	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99875	67.900000	0.00	0.0000	272.00	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
20	U	U	U	U	U	Y	143.0	
85	U	U	U	U	U	Y	175.0	
88	U	U	U	U	U	Y	350.0	
92	U	U	U	U	U	Y	146.0	
98	U	U	U	Y	Y	Y	652.0	
...	
99641	U	Y	Y	U	U	Y	45.0	
99674	U	U	Y	U	Y	Y	5.0	
99721	U	U	U	U	U	Y	524.0	
99760	U	U	U	U	U	Y	107.0	
99875	U	U	U	U	U	Y	958.0	

	Customer_ID
20	1000021
85	1000086
88	1000089
92	1000093
98	1000099
...	...
99641	1099642
99674	1099675
99721	1099722
99760	1099761
99875	1099876

[3451 rows x 100 columns]

Outliers in column 'change_rev':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	\
0	23.997500	219.250000	22.50	0.2475	0.000000	
14	212.515000	1971.500000	84.99	2.2275	249.500000	
20	172.440000	1978.000000	99.99	0.0000	362.250000	
40	82.162500	660.000000	50.00	0.0000	100.750000	
48	107.235000	782.000000	24.99	0.0000	232.750000	
...	
99721	52.020000	710.250000	46.86	2.7225	0.000000	
99739	47.420000	565.250000	30.00	0.4950	47.500000	
99760	188.396667	1289.000000	24.84	0.0000	653.666667	
99862	36.123333	158.666667	30.00	0.9900	14.666667	
99875	105.530000	736.000000	44.99	2.6400	194.000000	

	ovrrev_Mean	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	\
0	0.000000	0.000000	0.00	0.0000	-157.250000	...	
14	99.800000	99.800000	0.00	35.4975	-200.500000	...	
20	72.450000	72.450000	0.00	0.0000	-1007.000000	...	
40	30.225000	30.225000	0.00	1.9375	-184.000000	...	
48	86.117500	86.117500	0.00	0.0000	-258.000000	...	
...	
99721	0.000000	0.000000	0.00	0.0000	-396.250000	...	
99739	16.625000	16.625000	0.00	0.0000	-236.250000	...	
99760	163.556667	163.166667	0.39	0.0000	-1288.000000	...	
99862	5.133333	5.133333	0.00	0.0000	224.333333	...	
99875	67.900000	67.900000	0.00	0.0000	272.000000	...	

	forgntvl	ethnic	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	\
0	0.0	N	U	U	U	U	U	
14	0.0	N	U	U	Y	U	U	
20	0.0	Z	U	U	U	U	U	
40	0.0	N	U	U	U	Y	U	
48	0.0	N	U	Y	Y	Y	Y	
...	
99721	0.0	S	U	U	U	U	U	
99739	0.0	S	U	U	U	U	U	

99760	0.0	Z	U	U	U	U	U
99862	0.0	I	U	U	U	U	U
99875	0.0	H	U	U	U	U	U

	creditcd	eqpdays	Customer_ID
0	Y	361.0	1000001
14	Y	199.0	1000015
20	Y	143.0	1000021
40	Y	107.0	1000041
48	Y	162.0	1000049
...
99721	Y	524.0	1099722
99739	Y	495.0	1099740
99760	Y	107.0	1099761
99862	Y	128.0	1099863
99875	Y	958.0	1099876

[6988 rows x 100 columns]

Outliers in column 'drop_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
26	51.0250	382.25	48.7900	1.4850	0.75	0.075	
127	281.3300	3807.75	182.9375	8.4150	759.00	88.500	
158	83.8250	790.50	75.0000	4.9500	0.00	0.000	
164	75.8750	1060.75	75.0000	0.0000	0.00	0.000	
167	90.2975	1488.75	75.0000	4.2075	58.25	5.825	
...	
99537	149.2200	2032.00	97.4900	5.4450	234.50	58.625	
99590	62.9800	367.75	69.9900	0.0000	0.00	0.000	
99709	46.7300	348.75	46.7825	0.9900	0.00	0.000	
99721	52.0200	710.25	46.8600	2.7225	0.00	0.000	
99849	99.1500	927.50	70.0000	5.9400	32.00	8.000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
26	0.075	0.000	0.00	226.75	...	0.0	N	
127	88.425	0.075	0.00	5.25	...	0.0	N	
158	0.000	0.000	0.00	-60.50	...	0.0	G	
164	0.000	0.000	0.00	100.25	...	0.0	G	
167	5.825	0.000	2.34	317.25	...	0.0	U	
...	
99537	58.625	0.000	0.16	442.00	...	0.0	U	
99590	0.000	0.000	0.00	-49.75	...	0.0	H	
99709	0.000	0.000	0.00	-85.75	...	0.0	S	
99721	0.000	0.000	0.00	-396.25	...	0.0	S	
99849	8.000	0.000	15.21	-55.50	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
26	U	U	U	U	Y	Y	265.0	
127	U	U	U	U	Y	Y	77.0	
158	U	U	Y	Y	Y	Y	638.0	
164	Y	Y	U	U	U	Y	206.0	
167	U	U	U	U	U	Y	734.0	
...	
99537	U	U	U	U	U	Y	250.0	
99590	U	U	U	U	U	Y	122.0	
99709	U	U	U	U	U	Y	104.0	
99721	U	U	U	U	U	Y	524.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
26	1000027
127	1000128
158	1000159
164	1000165
167	1000168

```
...
99537      1099538
99590      1099591
99709      1099710
99721      1099722
99849      1099850
```

[2029 rows x 100 columns]

Outliers in column 'drop_dat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
101	114.1325	1649.75	83.0000	1.7325	51.500000	14.6475	
211	90.7400	1155.50	89.9900	6.4350	4.750000	1.6625	
236	124.5150	593.50	101.9250	0.0000	0.000000	0.0000	
373	117.1025	1077.25	67.3225	1.7325	152.250000	45.8550	
777	81.2525	726.75	66.5225	13.1175	28.500000	8.5500	
...	
98202	108.4650	888.00	79.9600	1.7325	72.500000	18.3700	
98615	61.2700	651.00	50.0000	0.0000	32.333333	10.8400	
99125	200.3850	838.75	33.6975	2.4750	437.750000	164.0175	
99196	91.2800	945.00	84.9900	0.0000	0.000000	0.0000	
99480	153.0700	165.00	84.9900	0.0000	1.500000	0.5850	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
101	1.875	12.7725	0.0000	-176.75	...	0.0	U	
211	0.000	1.6625	0.0000	-4.50	...	0.0	H	
236	0.000	0.0000	0.0000	133.50	...	0.0	N	
373	45.075	0.7800	0.1950	-424.25	...	0.0	G	
777	8.550	0.0000	1.0825	147.25	...	0.0	N	
...	
98202	17.625	0.7450	0.8775	422.00	...	0.0	N	
98615	5.900	4.9400	0.1300	-181.00	...	0.0	H	
99125	123.750	40.2675	0.1950	-739.75	...	0.0	I	
99196	0.000	0.0000	1.7200	-274.00	...	1.0	O	
99480	0.000	0.5850	0.0000	381.00	...	0.0	G	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
101	U	U	U	U	U	Y	306.0	
211	U	U	U	U	Y	Y	506.0	
236	U	U	U	U	U	Y	61.0	
373	U	U	U	U	U	N	103.0	
777	U	U	U	U	U	Y	41.0	
...	
98202	U	U	U	U	U	Y	72.0	
98615	U	U	U	U	U	Y	411.0	
99125	U	U	U	U	U	Y	61.0	
99196	U	Y	U	U	U	Y	557.0	
99480	U	U	U	U	U	Y	9.0	

	Customer_ID
101	1000102
211	1000212
236	1000237
373	1000374
777	1000778
...	...
98202	1098203
98615	1098616
99125	1099126
99196	1099197
99480	1099481

[545 rows x 100 columns]

Outliers in column 'blk_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
--	----------	----------	-------------	---------	-------------	-------------	---

20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000
85	97.590000	1804.00	75.00	1.4850	85.000000	8.500000
94	49.990000	820.50	59.99	0.0000	1.500000	0.000000
109	94.925000	1655.75	75.00	1.4850	25.500000	2.550000
114	113.522500	1807.25	85.00	1.9800	102.000000	10.200000
...
98453	210.710000	2421.25	151.24	2.4750	206.000000	41.250000
98564	52.722500	1501.25	61.98	0.7425	0.000000	0.000000
98730	95.850000	1732.75	75.00	0.0000	78.750000	19.687500
99509	156.712500	3140.75	159.99	2.7225	0.000000	0.000000
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic \
20	72.450000	0.00	0.0000	-1007.00	...	0.0	Z
85	8.500000	0.00	0.0000	-343.00	...	0.0	N
94	0.000000	0.00	0.0000	26.50	...	1.0	S
109	2.550000	0.00	0.0000	-51.75	...	0.0	J
114	10.200000	0.00	1.0025	-373.25	...	0.0	N
...
98453	41.250000	0.00	0.1725	-22.25	...	0.0	S
98564	0.000000	0.00	0.0000	306.75	...	0.0	N
98730	19.687500	0.00	0.0000	20.25	...	0.0	H
99509	0.000000	0.00	0.0000	-201.75	...	0.0	N
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays \
20	U	U	U	U	U	Y	143.0
85	U	U	U	U	U	Y	175.0
94	U	U	U	Y	Y	Y	451.0
109	U	U	U	Y	Y	Y	314.0
114	U	U	U	U	U	Y	387.0
...
98453	U	U	U	U	U	Y	533.0
98564	U	U	U	U	U	Y	4.0
98730	U	U	U	U	U	Y	327.0
99509	U	U	U	U	U	Y	278.0
99760	U	U	U	U	U	Y	107.0

	Customer_ID
20	1000021
85	1000086
94	1000095
109	1000110
114	1000115
...	...
98453	1098454
98564	1098565
98730	1098731
99509	1099510
99760	1099761

[2825 rows x 100 columns]

Outliers in column 'blkc_dat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean \
574	63.377500	885.25	66.0375	0.2475	27.250000	7.092500
729	255.537500	1943.25	98.9475	2.9700	643.250000	158.437500
1076	291.262500	5053.00	210.3925	7.6725	561.250000	84.187500
1655	14.057500	29.75	10.0000	0.0000	0.500000	0.500000
2004	55.017500	445.25	39.9900	0.0000	60.000000	21.090000
...
96083	441.807500	5855.00	162.2400	0.0000	982.750000	147.412500
96140	45.082500	721.75	49.9900	0.0000	12.750000	5.092500
96325	218.620000	2488.50	89.9900	1.4850	364.500000	127.575000
96968	72.685000	124.25	27.4925	0.2475	0.500000	0.195000

99760 188.396667 1289.00 24.8400 0.0000 653.666667 163.556667

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
574	6.312500	0.7800	0.0000	-473.25	...	0.0	H	
729	158.437500	0.0000	0.8075	-20.25	...	0.0	F	
1076	83.437500	0.7500	12.1350	-355.00	...	0.0	N	
1655	0.500000	0.0000	0.1950	-10.75	...	0.0	S	
2004	20.212500	0.8775	0.0000	2.75	...	0.0	Z	
...	
96083	86.775000	60.6375	20.7450	-572.00	...	0.0	N	
96140	4.800000	0.2925	0.0000	-63.75	...	0.0	H	
96325	116.637500	10.9375	0.0000	301.50	...	0.0	U	
96968	0.000000	0.1950	0.0000	28.75	...	0.0	N	
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
574	U	U	U	U	Y	Y	68.0	
729	U	U	U	U	U	Y	20.0	
1076	U	U	U	U	U	Y	126.0	
1655	U	U	U	U	U	Y	99.0	
2004	U	U	U	U	U	Y	55.0	
...	
96083	U	U	Y	U	U	Y	226.0	
96140	U	U	U	U	U	Y	98.0	
96325	U	U	U	U	U	N	216.0	
96968	U	Y	Y	Y	U	Y	197.0	
99760	U	U	U	U	U	Y	107.0	

	Customer_ID
574	1000575
729	1000730
1076	1001077
1655	1001656
2004	1002005
...	...
96083	1096084
96140	1096141
96325	1096326
96968	1096969
99760	1099761

[269 rows x 100 columns]

Outliers in column 'unan_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
4	55.2300	570.50	71.9800	0.0000	0.00	0.0000	
20	172.4400	1978.00	99.9900	0.0000	362.25	72.4500	
109	94.9250	1655.75	75.0000	1.4850	25.50	2.5500	
123	159.5175	2255.75	82.9900	3.2175	666.50	66.6500	
127	281.3300	3807.75	182.9375	8.4150	759.00	88.5000	
...	
99364	234.3425	1056.50	44.9900	0.9900	566.75	198.3625	
99498	141.4825	1850.75	75.0000	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.9900	2.7225	0.00	0.0000	
99537	149.2200	2032.00	97.4900	5.4450	234.50	58.6250	
99872	534.9300	4719.00	10.0000	6.9300	2018.00	515.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
4	0.0000	0.000	0.000	38.50	...	0.0	I	
20	72.4500	0.000	0.000	-1007.00	...	0.0	Z	
109	2.5500	0.000	0.000	-51.75	...	0.0	J	
123	66.6500	0.000	0.585	-2238.75	...	0.0	H	
127	88.4250	0.075	0.000	5.25	...	0.0	N	
...	
99364	198.3625	0.000	0.000	290.50	...	0.0	H	

99498	48.7500	0.000	0.000	16.25	...	0.0	D
99509	0.0000	0.000	0.000	-201.75	...	0.0	N
99537	58.6250	0.000	0.160	442.00	...	0.0	U
99872	485.7500	29.250	0.000	0.00	...	0.0	N

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
4	U	U	U	U	U	Y	434.0	
20	U	U	U	U	U	Y	143.0	
109	U	U	U	Y	Y	Y	314.0	
123	U	U	U	U	U	Y	318.0	
127	U	U	U	U	Y	Y	77.0	
...	
99364	U	U	U	U	U	Y	971.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
4	1000005
20	1000021
109	1000110
123	1000124
127	1000128
...	...
99364	1099365
99498	1099499
99509	1099510
99537	1099538
99872	1099873

[1809 rows x 100 columns]

Outliers in column 'unan_dat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
89	30.0000	149.50	30.0000	0.0000	0.00	0.0000	
98	103.2825	1376.00	84.9900	0.7425	38.00	15.2000	
101	114.1325	1649.75	83.0000	1.7325	51.50	14.6475	
166	41.7925	146.75	43.8650	0.0000	8.50	3.1450	
236	124.5150	593.50	101.9250	0.0000	0.00	0.0000	
...	
97108	107.2950	1089.00	79.9900	0.7425	112.75	45.1000	
97238	51.2225	1227.25	45.8625	1.4850	11.75	4.5825	
97331	53.5275	639.00	49.9900	0.7425	49.25	19.6950	
97421	36.1325	436.25	36.2825	0.0000	2.00	0.7800	
97672	31.1125	199.50	19.9900	0.2475	43.50	10.8750	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
89	0.000	0.0000	0.0000	28.50	...	0.0	N	
98	15.200	0.0000	7.6625	355.00	...	0.0	N	
101	1.875	12.7725	0.0000	-176.75	...	0.0	U	
166	3.145	0.0000	0.0000	-81.75	...	0.0	N	
236	0.000	0.0000	0.0000	133.50	...	0.0	N	
...	
97108	45.100	0.0000	1.4625	-49.00	...	0.0	U	
97238	0.000	4.5825	0.0000	38.75	...	0.0	Z	
97331	19.500	0.1950	0.0975	-82.00	...	0.0	Z	
97421	0.000	0.7800	6.5700	-221.25	...	0.0	Z	
97672	10.875	0.0000	0.0000	45.50	...	0.0	O	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
89	U	U	U	U	U	Y	129.0	
98	U	U	U	Y	Y	Y	652.0	
101	U	U	U	U	U	Y	306.0	
166	U	U	U	U	U	Y	185.0	

236	U	U	U	U	U	Y	61.0
...
97108	U	U	U	U	U	Y	193.0
97238	U	U	U	U	U	Y	161.0
97331	U	U	Y	U	U	Y	189.0
97421	U	U	Y	U	U	Y	186.0
97672	U	U	U	U	U	Y	398.0

	Customer_ID
89	1000090
98	1000099
101	1000102
166	1000167
236	1000237
...	...
97108	1097109
97238	1097239
97331	1097332
97421	1097422
97672	1097673

[877 rows x 100 columns]

Outliers in column 'plcd_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525	
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000	
109	94.9250	1655.75	75.00	1.4850	25.50	2.5500	
114	113.5225	1807.25	85.00	1.9800	102.00	10.2000	
...
99199	97.2875	1382.50	94.99	0.0000	86.25	21.5625	
99297	237.7525	2495.25	154.99	1.7325	36.00	5.4000	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99537	149.2200	2032.00	97.49	5.4450	234.50	58.6250	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
20	72.4500	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.0000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.5000	0.0000	0.0000	-343.00	...	0.0	N	
109	2.5500	0.0000	0.0000	-51.75	...	0.0	J	
114	10.2000	0.0000	1.0025	-373.25	...	0.0	N	
...
99199	21.5625	0.0000	0.0000	-302.50	...	0.0	N	
99297	5.4000	0.0000	0.0975	258.75	...	0.0	J	
99498	48.7500	0.0000	0.0000	16.25	...	0.0	D	
99509	0.0000	0.0000	0.0000	-201.75	...	0.0	N	
99537	58.6250	0.0000	0.1600	442.00	...	0.0	U	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
109	U	U	U	Y	Y	Y	314.0	
114	U	U	U	U	U	Y	387.0	
...
99199	U	Y	Y	U	U	Y	429.0	
99297	U	U	U	U	U	Y	76.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	

	Customer_ID
20	1000021

84 1000085
 85 1000086
 109 1000110
 114 1000115
 ...
 99199 1099200
 99297 1099298
 99498 1099499
 99509 1099510
 99537 1099538

[1424 rows x 100 columns]

Outliers in column 'plcd_dat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
19	50.9650	162.00	69.9900	0.00	2.50	0.9750	
39	33.4775	195.50	29.9900	0.00	0.25	0.0975	
84	93.0200	1348.25	75.0000	0.00	4.75	1.8525	
89	30.0000	149.50	30.0000	0.00	0.00	0.0000	
92	72.8100	1306.00	77.8975	0.00	0.00	0.0000	
...	
99793	28.5000	319.00	30.0000	0.00	0.00	0.0000	
99849	99.1500	927.50	70.0000	5.94	32.00	8.0000	
99872	534.9300	4719.00	10.0000	6.93	2018.00	515.0000	
99899	45.2600	149.00	44.4800	0.00	2.00	0.7800	
99939	49.3625	187.75	40.0725	2.97	18.00	6.3200	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
19	0.000	0.9750	0.000	-58.00	...	0.0	S	
39	0.000	0.0975	2.565	54.50	...	0.0	J	
84	0.000	1.8525	1.920	-165.25	...	0.0	S	
89	0.000	0.0000	0.000	28.50	...	0.0	N	
92	0.000	0.0000	0.000	-462.00	...	0.0	O	
...	
99793	0.000	0.0000	0.000	11.00	...	0.0	N	
99849	8.000	0.0000	15.210	-55.50	...	0.0	N	
99872	485.750	29.2500	0.000	0.00	...	0.0	N	
99899	0.000	0.7800	0.000	-86.00	...	0.0	N	
99939	6.125	0.1950	0.000	-187.75	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
19	U	U	Y	Y	Y	N	253.0	
39	U	U	U	Y	U	Y	179.0	
84	U	U	U	U	U	Y	10.0	
89	U	U	U	U	U	Y	129.0	
92	U	U	U	U	U	Y	146.0	
...	
99793	U	U	Y	Y	U	Y	101.0	
99849	U	U	U	U	U	Y	408.0	
99872	U	U	U	U	U	Y	62.0	
99899	U	U	U	U	Y	Y	75.0	
99939	U	U	U	U	U	Y	153.0	

Customer_ID

19 1000020
 39 1000040
 84 1000085
 89 1000090
 92 1000093
 ...
 99793 1099794
 99849 1099850
 99872 1099873
 99899 1099900
 99939 1099940

[3648 rows x 100 columns]

Outliers in column 'recv_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
48	107.2350	782.00	24.99	0.0000	232.75	86.1175	
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525	
...	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99510	84.7125	908.75	74.99	0.4950	2.25	0.8775	
99849	99.1500	927.50	70.00	5.9400	32.00	8.0000	
99872	534.9300	4719.00	10.00	6.9300	2018.00	515.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.8000	0.0000	35.4975	-200.50	...	0.0	N	
20	72.4500	0.0000	0.0000	-1007.00	...	0.0	Z	
47	0.0000	0.0000	0.0000	-205.50	...	0.0	H	
48	86.1175	0.0000	0.0000	-258.00	...	0.0	N	
84	0.0000	1.8525	1.9200	-165.25	...	0.0	S	
...	
99498	48.7500	0.0000	0.0000	16.25	...	0.0	D	
99509	0.0000	0.0000	0.0000	-201.75	...	0.0	N	
99510	0.0000	0.8775	0.0000	43.25	...	0.0	H	
99849	8.0000	0.0000	15.2100	-55.50	...	0.0	N	
99872	485.7500	29.2500	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
47	U	U	U	U	U	Y	151.0	
48	U	Y	Y	Y	Y	Y	162.0	
84	U	U	U	U	U	Y	10.0	
...	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99510	U	U	U	U	Y	Y	469.0	
99849	U	U	U	U	U	Y	408.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
14	1000015
20	1000021
47	1000048
48	1000049
84	1000085
...	...
99498	1099499
99509	1099510
99510	1099511
99849	1099850
99872	1099873

[2082 rows x 100 columns]

Outliers in column 'recv_sms_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
163	32.270000	112.50	31.9800	0.0000	0.000000	0.000000	
211	90.740000	1155.50	89.9900	6.4350	4.750000	1.662500	
321	80.972500	1270.25	86.9800	0.7425	0.000000	0.000000	
373	117.102500	1077.25	67.3225	1.7325	152.250000	45.855000	
975	191.787500	615.25	49.9900	0.0000	63.000000	22.050000	
...	

98192	35.950000	146.75	36.9900	0.0000	5.250000	2.047500
98258	101.130000	908.75	61.2800	0.0000	24.250000	8.600000
98632	77.177500	264.50	76.9900	0.0000	0.000000	1.562500
99106	35.237500	119.00	31.9900	0.2475	0.000000	3.000000
99163	193.956667	1502.00	84.1400	1.3200	429.333333	107.333333

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
163	0.000000	0.0000	0.000	-2.50	...	0.0	H	
211	0.000000	1.6625	0.000	-4.50	...	0.0	H	
321	0.000000	0.0000	0.000	327.75	...	0.0	N	
373	45.075000	0.7800	0.195	-424.25	...	0.0	G	
975	16.362500	5.6875	0.000	53.75	...	1.0	H	
...	
98192	0.000000	2.0475	0.000	-62.75	...	0.0	G	
98258	8.600000	0.0000	0.000	-74.75	...	0.0	N	
98632	0.000000	0.0000	0.000	107.50	...	0.0	H	
99106	0.000000	0.0000	0.000	-76.00	...	0.0	F	
99163	107.333333	0.0000	0.000	387.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
163	U	U	U	Y	U	N	517.0	
211	U	U	U	U	Y	Y	506.0	
321	U	U	U	U	U	Y	369.0	
373	U	U	U	U	U	N	103.0	
975	U	U	Y	U	U	Y	32.0	
...	
98192	U	U	U	U	U	Y	386.0	
98258	U	U	U	U	U	Y	169.0	
98632	U	U	U	U	U	Y	577.0	
99106	U	U	U	U	U	Y	874.0	
99163	U	U	U	U	U	Y	224.0	

	Customer_ID
163	1000164
211	1000212
321	1000322
373	1000374
975	1000976
...	...
98192	1098193
98258	1098259
98632	1098633
99106	1099107
99163	1099164

[233 rows x 100 columns]

Outliers in column 'comp_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525	
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000	
101	114.1325	1649.75	83.00	1.7325	51.50	14.6475	
...	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99537	149.2200	2032.00	97.49	5.4450	234.50	58.6250	
99852	37.0300	615.00	44.99	0.9900	3.00	1.0500	
99872	534.9300	4719.00	10.00	6.9300	2018.00	515.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.000	1.8525	1.9200	-165.25	...	0.0	S	

85	8.500	0.0000	0.0000	-343.00	...	0.0	N
101	1.875	12.7725	0.0000	-176.75	...	0.0	U
...
99498	48.750	0.0000	0.0000	16.25	...	0.0	D
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N
99537	58.625	0.0000	0.1600	442.00	...	0.0	U
99852	1.050	0.0000	0.0000	0.00	...	0.0	H
99872	485.750	29.2500	0.0000	0.00	...	0.0	N

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
101	U	U	U	U	U	Y	306.0	
...	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	
99852	U	U	U	U	U	Y	140.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
101	1000102
...	...
99498	1099499
99509	1099510
99537	1099538
99852	1099853
99872	1099873

[1407 rows x 100 columns]

Outliers in column 'comp_dat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
19	50.9650	162.00	69.9900	0.0000	2.50	0.9750	
39	33.4775	195.50	29.9900	0.0000	0.25	0.0975	
84	93.0200	1348.25	75.0000	0.0000	4.75	1.8525	
92	72.8100	1306.00	77.8975	0.0000	0.00	0.0000	
101	114.1325	1649.75	83.0000	1.7325	51.50	14.6475	
...	
99793	28.5000	319.00	30.0000	0.0000	0.00	0.0000	
99849	99.1500	927.50	70.0000	5.9400	32.00	8.0000	
99872	534.9300	4719.00	10.0000	6.9300	2018.00	515.0000	
99899	45.2600	149.00	44.4800	0.0000	2.00	0.7800	
99939	49.3625	187.75	40.0725	2.9700	18.00	6.3200	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
19	0.000	0.9750	0.000	-58.00	...	0.0	S	
39	0.000	0.0975	2.565	54.50	...	0.0	J	
84	0.000	1.8525	1.920	-165.25	...	0.0	S	
92	0.000	0.0000	0.000	-462.00	...	0.0	O	
101	1.875	12.7725	0.000	-176.75	...	0.0	U	
...	
99793	0.000	0.0000	0.000	11.00	...	0.0	N	
99849	8.000	0.0000	15.210	-55.50	...	0.0	N	
99872	485.750	29.2500	0.000	0.00	...	0.0	N	
99899	0.000	0.7800	0.000	-86.00	...	0.0	N	
99939	6.125	0.1950	0.000	-187.75	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
--	--------	--------	---------	----------	----------	----------	---------	---

19	U	U	Y	Y	Y	N	253.0
39	U	U	U	Y	U	Y	179.0
84	U	U	U	U	U	Y	10.0
92	U	U	U	U	U	Y	146.0
101	U	U	U	U	U	Y	306.0
...
99793	U	U	Y	Y	U	Y	101.0
99849	U	U	U	U	U	Y	408.0
99872	U	U	U	U	U	Y	62.0
99899	U	U	U	U	Y	Y	75.0
99939	U	U	U	U	U	Y	153.0

	Customer_ID
19	1000020
39	1000040
84	1000085
92	1000093
101	1000102
...	...
99793	1099794
99849	1099850
99872	1099873
99899	1099900
99939	1099940

[3201 rows x 100 columns]

Outliers in column 'custcare_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
4	55.230000	570.50	71.98	0.0000	0.000000	0.000000	
16	63.017500	440.25	59.98	0.0000	5.750000	1.725000	
18	55.270000	1212.75	49.99	0.7425	0.000000	0.000000	
83	55.190000	1087.75	69.99	0.0000	13.000000	5.200000	
94	49.990000	820.50	59.99	0.0000	1.500000	0.000000	
...	
99510	84.712500	908.75	74.99	0.4950	2.250000	0.877500	
99590	62.980000	367.75	69.99	0.0000	0.000000	0.000000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99793	28.500000	319.00	30.00	0.0000	0.000000	0.000000	
99852	37.030000	615.00	44.99	0.9900	3.000000	1.050000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forntv1	ethnic	\
4	0.000000	0.0000	0.0000	38.50	...	0.0	I	
16	1.725000	0.0000	1.3125	-16.25	...	0.0	N	
18	0.000000	0.0000	1.2850	169.25	...	0.0	N	
83	5.200000	0.0000	0.0000	109.25	...	1.0	U	
94	0.000000	0.0000	0.0000	26.50	...	1.0	S	
...	
99510	0.000000	0.8775	0.0000	43.25	...	0.0	H	
99590	0.000000	0.0000	0.0000	-49.75	...	0.0	H	
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z	
99793	0.000000	0.0000	0.0000	11.00	...	0.0	N	
99852	1.050000	0.0000	0.0000	0.00	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
4	U	U	U	U	U	Y	434.0	
16	U	U	U	U	U	Y	530.0	
18	U	U	U	U	U	Y	408.0	
83	U	U	U	U	U	Y	233.0	
94	U	U	U	Y	Y	Y	451.0	
...	
99510	U	U	U	U	Y	Y	469.0	
99590	U	U	U	U	U	Y	122.0	
99760	U	U	U	U	U	Y	107.0	
99793	U	U	Y	Y	U	Y	101.0	

99852 U U U U U Y 140.0

Customer_ID
4 1000005
16 1000017
18 1000019
83 1000084
94 1000095
... ...
99510 1099511
99590 1099591
99760 1099761
99793 1099794
99852 1099853

[3732 rows x 100 columns]

Outliers in column 'ccrndmou_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
4	55.230000	570.50	71.98	0.0000	0.000000	0.000000	
16	63.017500	440.25	59.98	0.0000	5.750000	1.725000	
18	55.270000	1212.75	49.99	0.7425	0.000000	0.000000	
47	78.287500	851.50	85.00	0.0000	0.000000	0.000000	
50	30.260000	23.75	29.99	0.0000	0.000000	0.000000	
...	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99793	28.500000	319.00	30.00	0.0000	0.000000	0.000000	
99849	99.150000	927.50	70.00	5.9400	32.000000	8.000000	
99852	37.030000	615.00	44.99	0.9900	3.000000	1.050000	
99876	45.490000	648.00	44.99	0.0000	30.000000	10.500000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
4	0.000000	0.00	0.0000	38.50	...	0.0	I	
16	1.725000	0.00	1.3125	-16.25	...	0.0	N	
18	0.000000	0.00	1.2850	169.25	...	0.0	N	
47	0.000000	0.00	0.0000	-205.50	...	0.0	H	
50	0.000000	0.00	0.0000	25.25	...	1.0	I	
...	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99793	0.000000	0.00	0.0000	11.00	...	0.0	N	
99849	8.000000	0.00	15.2100	-55.50	...	0.0	N	
99852	1.050000	0.00	0.0000	0.00	...	0.0	H	
99876	10.500000	0.00	0.0000	0.00	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
4	U	U	U	U	U	Y	434.0	
16	U	U	U	U	U	Y	530.0	
18	U	U	U	U	U	Y	408.0	
47	U	U	U	U	U	Y	151.0	
50	U	U	U	U	U	Y	985.0	
...	
99760	U	U	U	U	U	Y	107.0	
99793	U	U	Y	Y	U	Y	101.0	
99849	U	U	U	U	U	Y	408.0	
99852	U	U	U	U	U	Y	140.0	
99876	U	U	U	U	Y	Y	351.0	

Customer_ID
4 1000005
16 1000017
18 1000019
47 1000048
50 1000051
... ...
99760 1099761

99793 1099794
 99849 1099850
 99852 1099853
 99876 1099877

[4016 rows x 100 columns]

Outliers in column 'cc_mou_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
4	55.2300	570.50	71.98	0.0000	0.00	0.0000	
16	63.0175	440.25	59.98	0.0000	5.75	1.7250	
18	55.2700	1212.75	49.99	0.7425	0.00	0.0000	
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
48	107.2350	782.00	24.99	0.0000	232.75	86.1175	
...	
99793	28.5000	319.00	30.00	0.0000	0.00	0.0000	
99819	34.9900	167.00	44.99	0.0000	0.00	0.0000	
99849	99.1500	927.50	70.00	5.9400	32.00	8.0000	
99852	37.0300	615.00	44.99	0.9900	3.00	1.0500	
99876	45.4900	648.00	44.99	0.0000	30.00	10.5000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
4	0.0000	0.0	0.0000	38.50	...	0.0	I	
16	1.7250	0.0	1.3125	-16.25	...	0.0	N	
18	0.0000	0.0	1.2850	169.25	...	0.0	N	
47	0.0000	0.0	0.0000	-205.50	...	0.0	H	
48	86.1175	0.0	0.0000	-258.00	...	0.0	N	
...	
99793	0.0000	0.0	0.0000	11.00	...	0.0	N	
99819	0.0000	0.0	0.0000	0.00	...	0.0	H	
99849	8.0000	0.0	15.2100	-55.50	...	0.0	N	
99852	1.0500	0.0	0.0000	0.00	...	0.0	H	
99876	10.5000	0.0	0.0000	0.00	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
4	U	U	U	U	U	Y	434.0	
16	U	U	U	U	U	Y	530.0	
18	U	U	U	U	U	Y	408.0	
47	U	U	U	U	U	Y	151.0	
48	U	Y	Y	Y	Y	Y	162.0	
...	
99793	U	U	Y	Y	U	Y	101.0	
99819	U	U	U	U	U	Y	31.0	
99849	U	U	U	U	U	Y	408.0	
99852	U	U	U	U	U	Y	140.0	
99876	U	U	U	U	Y	Y	351.0	

	Customer_ID
4	1000005
16	1000017
18	1000019
47	1000048
48	1000049
...	...
99793	1099794
99819	1099820
99849	1099850
99852	1099853
99876	1099877

[4391 rows x 100 columns]

Outliers in column 'inonemin_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	

84	93.020000	1348.25	75.00	0.0000	4.750000	1.852500
85	97.590000	1804.00	75.00	1.4850	85.000000	8.500000
113	90.750000	1229.00	69.99	1.4850	102.750000	20.550000
...
99717	197.945000	1118.50	50.00	5.4450	475.000000	142.500000
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667
99849	99.150000	927.50	70.00	5.9400	32.000000	8.000000
99852	37.030000	615.00	44.99	0.9900	3.000000	1.050000
99872	534.930000	4719.00	10.00	6.9300	2018.000000	515.000000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic \
14	99.800000	0.0000	35.4975	-200.50	...	0.0	N
20	72.450000	0.0000	0.0000	-1007.00	...	0.0	Z
84	0.000000	1.8525	1.9200	-165.25	...	0.0	S
85	8.500000	0.0000	0.0000	-343.00	...	0.0	N
113	20.550000	0.0000	0.0000	-254.00	...	0.0	G
...
99717	142.500000	0.0000	0.0000	30.50	...	0.0	N
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z
99849	8.000000	0.0000	15.2100	-55.50	...	0.0	N
99852	1.050000	0.0000	0.0000	0.00	...	0.0	H
99872	485.750000	29.2500	0.0000	0.00	...	0.0	N

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays \
14	U	U	Y	U	U	Y	199.0
20	U	U	U	U	U	Y	143.0
84	U	U	U	U	U	Y	10.0
85	U	U	U	U	U	Y	175.0
113	U	U	U	Y	U	Y	263.0
...
99717	U	Y	Y	Y	U	Y	917.0
99760	U	U	U	U	U	Y	107.0
99849	U	U	U	U	U	Y	408.0
99852	U	U	U	U	U	Y	140.0
99872	U	U	U	U	U	Y	62.0

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
113	1000114
...	...
99717	1099718
99760	1099761
99849	1099850
99852	1099853
99872	1099873

[2388 rows x 100 columns]

Outliers in column 'threeway_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean \
16	63.0175	440.250000	59.98	0.00	5.75	1.7250
20	172.4400	1978.000000	99.99	0.00	362.25	72.4500
39	33.4775	195.500000	29.99	0.00	0.25	0.0975
40	82.1625	660.000000	50.00	0.00	100.75	30.2250
83	55.1900	1087.750000	69.99	0.00	13.00	5.2000
...
99776	52.3100	157.666667	50.00	2.31	0.00	0.0000
99852	37.0300	615.000000	44.99	0.99	3.00	1.0500
99872	534.9300	4719.000000	10.00	6.93	2018.00	515.0000
99881	56.2500	679.000000	75.00	0.00	0.00	0.0000
99919	28.4900	2.000000	29.99	0.00	0.00	0.0000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	\
16	1.725	0.0000	1.3125	-16.250000	...	0.0	
20	72.450	0.0000	0.0000	-1007.000000	...	0.0	
39	0.000	0.0975	2.5650	54.500000	...	0.0	
40	30.225	0.0000	1.9375	-184.000000	...	0.0	
83	5.200	0.0000	0.0000	109.250000	...	1.0	
...	
99776	0.000	0.0000	0.0000	-5.666667	...	1.0	
99852	1.050	0.0000	0.0000	0.000000	...	0.0	
99872	485.750	29.2500	0.0000	0.000000	...	0.0	
99881	0.000	0.0000	0.0000	0.000000	...	0.0	
99919	0.000	0.0000	0.0000	0.000000	...	0.0	

	ethnic	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
16	N	U	U	U	U	U	Y	530.0	
20	Z	U	U	U	U	U	Y	143.0	
39	J	U	U	U	Y	U	Y	179.0	
40	N	U	U	U	Y	U	Y	107.0	
83	U	U	U	U	U	U	Y	233.0	
...	
99776	G	U	Y	Y	U	U	Y	910.0	
99852	H	U	U	U	U	U	Y	140.0	
99872	N	U	U	U	U	U	Y	62.0	
99881	S	U	U	U	U	U	Y	324.0	
99919	G	U	U	Y	U	U	Y	487.0	

	Customer_ID
16	1000017
20	1000021
39	1000040
40	1000041
83	1000084
...	...
99776	1099777
99852	1099853
99872	1099873
99881	1099882
99919	1099920

[6308 rows x 100 columns]

Outliers in column 'mou_cvce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
83	55.1900	1087.75	69.99	0.0000	13.00	5.2000	
98	103.2825	1376.00	84.99	0.7425	38.00	15.2000	
101	114.1325	1649.75	83.00	1.7325	51.50	14.6475	
109	94.9250	1655.75	75.00	1.4850	25.50	2.5500	
...	
99355	31.4850	742.00	44.99	0.2475	26.50	9.2750	
99362	91.3400	1032.75	80.00	3.4650	31.50	7.8750	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99537	149.2200	2032.00	97.49	5.4450	234.50	58.6250	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
83	5.200	0.0000	0.0000	109.25	...	1.0	U	
98	15.200	0.0000	7.6625	355.00	...	0.0	N	
101	1.875	12.7725	0.0000	-176.75	...	0.0	U	
109	2.550	0.0000	0.0000	-51.75	...	0.0	J	
...	
99355	9.275	0.0000	0.0000	-6.00	...	0.0	H	
99362	7.875	0.0000	0.0000	-402.75	...	0.0	N	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	

99509	0.000	0.0000	0.0000	-201.75	...	0.0	N
99537	58.625	0.0000	0.1600	442.00	...	0.0	U

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
20	U	U	U	U	U	Y	143.0	
83	U	U	U	U	U	Y	233.0	
98	U	U	U	Y	Y	Y	652.0	
101	U	U	U	U	U	Y	306.0	
109	U	U	U	Y	Y	Y	314.0	
...	
99355	U	U	U	U	U	Y	116.0	
99362	U	U	U	U	U	Y	189.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	

	Customer_ID
20	1000021
83	1000084
98	1000099
101	1000102
109	1000110
...	...
99355	1099356
99362	1099363
99498	1099499
99509	1099510
99537	1099538

[1635 rows x 100 columns]

Outliers in column 'mou_cdat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
19	50.9650	162.00	69.9900	0.0000	2.50	0.9750	
39	33.4775	195.50	29.9900	0.0000	0.25	0.0975	
84	93.0200	1348.25	75.0000	0.0000	4.75	1.8525	
92	72.8100	1306.00	77.8975	0.0000	0.00	0.0000	
101	114.1325	1649.75	83.0000	1.7325	51.50	14.6475	
...	
99793	28.5000	319.00	30.0000	0.0000	0.00	0.0000	
99849	99.1500	927.50	70.0000	5.9400	32.00	8.0000	
99872	534.9300	4719.00	10.0000	6.9300	2018.00	515.0000	
99899	45.2600	149.00	44.4800	0.0000	2.00	0.7800	
99939	49.3625	187.75	40.0725	2.9700	18.00	6.3200	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
19	0.000	0.9750	0.000	-58.00	...	0.0	S	
39	0.000	0.0975	2.565	54.50	...	0.0	J	
84	0.000	1.8525	1.920	-165.25	...	0.0	S	
92	0.000	0.0000	0.000	-462.00	...	0.0	O	
101	1.875	12.7725	0.000	-176.75	...	0.0	U	
...	
99793	0.000	0.0000	0.000	11.00	...	0.0	N	
99849	8.000	0.0000	15.210	-55.50	...	0.0	N	
99872	485.750	29.2500	0.000	0.00	...	0.0	N	
99899	0.000	0.7800	0.000	-86.00	...	0.0	N	
99939	6.125	0.1950	0.000	-187.75	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
19	U	U	Y	Y	Y	N	253.0	
39	U	U	U	Y	U	Y	179.0	
84	U	U	U	U	U	Y	10.0	
92	U	U	U	U	U	Y	146.0	
101	U	U	U	U	U	Y	306.0	
...	

99793	U	U	Y	Y	U	Y	101.0
99849	U	U	U	U	U	Y	408.0
99872	U	U	U	U	U	Y	62.0
99899	U	U	U	U	Y	Y	75.0
99939	U	U	U	U	U	Y	153.0

	Customer_ID
19	1000020
39	1000040
84	1000085
92	1000093
101	1000102
...	...
99793	1099794
99849	1099850
99872	1099873
99899	1099900
99939	1099940

[3201 rows x 100 columns]

Outliers in column 'mou_rvce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
18	55.270000	1212.75	49.99	0.7425	0.000000	0.000000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
40	82.162500	660.00	50.00	0.0000	100.750000	30.225000	
47	78.287500	851.50	85.00	0.0000	0.000000	0.000000	
...	
99343	72.825000	851.75	59.99	1.2375	57.000000	17.100000	
99364	234.342500	1056.50	44.99	0.9900	566.750000	198.362500	
99498	141.482500	1850.75	75.00	11.6325	195.000000	48.750000	
99510	84.712500	908.75	74.99	0.4950	2.250000	0.877500	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forntv1	ethnic	\
14	99.800000	0.0000	35.4975	-200.50	...	0.0	N	
18	0.000000	0.0000	1.2850	169.25	...	0.0	N	
20	72.450000	0.0000	0.0000	-1007.00	...	0.0	Z	
40	30.225000	0.0000	1.9375	-184.00	...	0.0	N	
47	0.000000	0.0000	0.0000	-205.50	...	0.0	H	
...	
99343	17.100000	0.0000	0.0000	25.25	...	0.0	H	
99364	198.362500	0.0000	0.0000	290.50	...	0.0	H	
99498	48.750000	0.0000	0.0000	16.25	...	0.0	D	
99510	0.000000	0.8775	0.0000	43.25	...	0.0	H	
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
18	U	U	U	U	U	Y	408.0	
20	U	U	U	U	U	Y	143.0	
40	U	U	U	Y	U	Y	107.0	
47	U	U	U	U	U	Y	151.0	
...	
99343	U	U	U	U	U	Y	4.0	
99364	U	U	U	U	U	Y	971.0	
99498	U	U	Y	Y	U	Y	736.0	
99510	U	U	U	U	Y	Y	469.0	
99760	U	U	U	U	U	Y	107.0	

	Customer_ID
14	1000015
18	1000019
20	1000021

```

40      1000041
47      1000048
...
99343   1099344
99364   1099365
99498   1099499
99510   1099511
99760   1099761

```

[2170 rows x 100 columns]

Outliers in column 'owylis_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
40	82.1625	660.00	50.00	0.0000	100.75	30.2250	
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000	
101	114.1325	1649.75	83.00	1.7325	51.50	14.6475	
113	90.7500	1229.00	69.99	1.4850	102.75	20.5500	
123	159.5175	2255.75	82.99	3.2175	666.50	66.6500	
...	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99588	65.5125	664.50	35.00	1.2375	69.75	24.4125	
99590	62.9800	367.75	69.99	0.0000	0.00	0.0000	
99721	52.0200	710.25	46.86	2.7225	0.00	0.0000	
99849	99.1500	927.50	70.00	5.9400	32.00	8.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
40	30.2250	0.0000	1.9375	-184.00	...	0.0	N	
85	8.5000	0.0000	0.0000	-343.00	...	0.0	N	
101	1.8750	12.7725	0.0000	-176.75	...	0.0	U	
113	20.5500	0.0000	0.0000	-254.00	...	0.0	G	
123	66.6500	0.0000	0.5850	-2238.75	...	0.0	H	
...	
99509	0.0000	0.0000	0.0000	-201.75	...	0.0	N	
99588	24.4125	0.0000	0.0000	-144.50	...	0.0	N	
99590	0.0000	0.0000	0.0000	-49.75	...	0.0	H	
99721	0.0000	0.0000	0.0000	-396.25	...	0.0	S	
99849	8.0000	0.0000	15.2100	-55.50	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
40	U	U	U	Y	U	Y	107.0	
85	U	U	U	U	U	Y	175.0	
101	U	U	U	U	U	Y	306.0	
113	U	U	U	Y	U	Y	263.0	
123	U	U	U	U	U	Y	318.0	
...	
99509	U	U	U	U	U	Y	278.0	
99588	U	U	Y	U	U	Y	518.0	
99590	U	U	U	U	U	Y	122.0	
99721	U	U	U	U	U	Y	524.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
40	1000041
85	1000086
101	1000102
113	1000114
123	1000124
...	...
99509	1099510
99588	1099589
99590	1099591
99721	1099722
99849	1099850

[1790 rows x 100 columns]

Outliers in column 'mouowylisv_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
40	82.1625	660.00	50.0000	0.0000	100.75	30.2250	
85	97.5900	1804.00	75.0000	1.4850	85.00	8.5000	
113	90.7500	1229.00	69.9900	1.4850	102.75	20.5500	
123	159.5175	2255.75	82.9900	3.2175	666.50	66.6500	
127	281.3300	3807.75	182.9375	8.4150	759.00	88.5000	
...	
99364	234.3425	1056.50	44.9900	0.9900	566.75	198.3625	
99509	156.7125	3140.75	159.9900	2.7225	0.00	0.0000	
99588	65.5125	664.50	35.0000	1.2375	69.75	24.4125	
99721	52.0200	710.25	46.8600	2.7225	0.00	0.0000	
99849	99.1500	927.50	70.0000	5.9400	32.00	8.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
40	30.2250	0.000	1.9375	-184.00	...	0.0	N	
85	8.5000	0.000	0.0000	-343.00	...	0.0	N	
113	20.5500	0.000	0.0000	-254.00	...	0.0	G	
123	66.6500	0.000	0.5850	-2238.75	...	0.0	H	
127	88.4250	0.075	0.0000	5.25	...	0.0	N	
...	
99364	198.3625	0.000	0.0000	290.50	...	0.0	H	
99509	0.0000	0.000	0.0000	-201.75	...	0.0	N	
99588	24.4125	0.000	0.0000	-144.50	...	0.0	N	
99721	0.0000	0.000	0.0000	-396.25	...	0.0	S	
99849	8.0000	0.000	15.2100	-55.50	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
40	U	U	U	Y	U	Y	107.0	
85	U	U	U	U	U	Y	175.0	
113	U	U	U	Y	U	Y	263.0	
123	U	U	U	U	U	Y	318.0	
127	U	U	U	U	Y	Y	77.0	
...	
99364	U	U	U	U	U	Y	971.0	
99509	U	U	U	U	U	Y	278.0	
99588	U	U	Y	U	U	Y	518.0	
99721	U	U	U	U	U	Y	524.0	
99849	U	U	U	U	U	Y	408.0	

Customer_ID

40	1000041
85	1000086
113	1000114
123	1000124
127	1000128
...	...
99364	1099365
99509	1099510
99588	1099589
99721	1099722
99849	1099850

[2263 rows x 100 columns]

Outliers in column 'iwylis_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
47	78.287500	851.50	85.0000	0.0000	0.000000	0.000000	
84	93.020000	1348.25	75.0000	0.0000	4.750000	1.852500	
85	97.590000	1804.00	75.0000	1.4850	85.000000	8.500000	
101	114.132500	1649.75	83.0000	1.7325	51.500000	14.647500	
114	113.522500	1807.25	85.0000	1.9800	102.000000	10.200000	
...	
99588	65.512500	664.50	35.0000	1.2375	69.750000	24.412500	
99590	62.980000	367.75	69.9900	0.0000	0.000000	0.000000	

99709	46.730000	348.75	46.7825	0.9900	0.000000	0.000000
99721	52.020000	710.25	46.8600	2.7225	0.000000	0.000000
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
47	0.000000	0.0000	0.0000	-205.50	...	0.0	H	
84	0.000000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500000	0.0000	0.0000	-343.00	...	0.0	N	
101	1.875000	12.7725	0.0000	-176.75	...	0.0	U	
114	10.200000	0.0000	1.0025	-373.25	...	0.0	N	
...	
99588	24.412500	0.0000	0.0000	-144.50	...	0.0	N	
99590	0.000000	0.0000	0.0000	-49.75	...	0.0	H	
99709	0.000000	0.0000	0.0000	-85.75	...	0.0	S	
99721	0.000000	0.0000	0.0000	-396.25	...	0.0	S	
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
47	U	U	U	U	U	Y	151.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
101	U	U	U	U	U	Y	306.0	
114	U	U	U	U	U	Y	387.0	
...	
99588	U	U	Y	U	U	Y	518.0	
99590	U	U	U	U	U	Y	122.0	
99709	U	U	U	U	U	Y	104.0	
99721	U	U	U	U	U	Y	524.0	
99760	U	U	U	U	U	Y	107.0	

	Customer_ID
47	1000048
84	1000085
85	1000086
101	1000102
114	1000115
...	...
99588	1099589
99590	1099591
99709	1099710
99721	1099722
99760	1099761

[2836 rows x 100 columns]

Outliers in column 'mouiwyllsv_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
47	78.287500	851.50	85.0000	0.0000	0.000000	0.000000	
84	93.020000	1348.25	75.0000	0.0000	4.750000	1.852500	
85	97.590000	1804.00	75.0000	1.4850	85.000000	8.500000	
98	103.282500	1376.00	84.9900	0.7425	38.000000	15.200000	
101	114.132500	1649.75	83.0000	1.7325	51.500000	14.647500	
...	
99590	62.980000	367.75	69.9900	0.0000	0.000000	0.000000	
99621	35.700000	371.50	15.8875	1.7325	50.250000	15.075000	
99709	46.730000	348.75	46.7825	0.9900	0.000000	0.000000	
99721	52.020000	710.25	46.8600	2.7225	0.000000	0.000000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
47	0.000000	0.0000	0.0000	-205.50	...	0.0	H	
84	0.000000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500000	0.0000	0.0000	-343.00	...	0.0	N	
98	15.200000	0.0000	7.6625	355.00	...	0.0	N	
101	1.875000	12.7725	0.0000	-176.75	...	0.0	U	

```

...
99590      0.000000      0.0000      0.0000      -49.75      ...      0.0      H
99621     15.075000      0.0000      0.0000     -371.50      ...      0.0      I
99709      0.000000      0.0000      0.0000     -85.75      ...      0.0      S
99721      0.000000      0.0000      0.0000    -396.25      ...      0.0      S
99760     163.166667      0.3900      0.0000   -1288.00      ...      0.0      Z

```

```

      kid0_2  kid3_5  kid6_10  kid11_15  kid16_17  creditcd  eqpdays  \
47          U      U      U      U      U      Y      151.0
84          U      U      U      U      U      Y      10.0
85          U      U      U      U      U      Y      175.0
98          U      U      U      Y      Y      Y      652.0
101         U      U      U      U      U      Y      306.0
...
99590      U      U      U      U      U      Y      122.0
99621      U      U      U      U      U      Y      319.0
99709      U      U      U      U      U      Y      104.0
99721      U      U      U      U      U      Y      524.0
99760      U      U      U      U      U      Y      107.0

```

```

Customer_ID
47      1000048
84      1000085
85      1000086
98      1000099
101     1000102
...
99590     1099591
99621     1099622
99709     1099710
99721     1099722
99760     1099761

```

[2964 rows x 100 columns]

Outliers in column 'peak_vce_Mean':

```

      rev_Mean  mou_Mean  totmrc_Mean  da_Mean  ovrmou_Mean  ovrrev_Mean  \
14      212.5150   1971.50    84.990000    2.2275   249.500000   99.800000
20      172.4400   1978.00    99.990000    0.0000   362.250000   72.450000
84       93.0200   1348.25    75.000000    0.0000    4.750000   1.852500
85       97.5900   1804.00    75.000000    1.4850   85.000000   8.500000
88       79.5950    828.00    75.000000    0.0000    0.000000   0.000000
...
99286   136.7400   1681.00    64.723333    4.9500   192.666667   63.216667
99297   237.7525   2495.25   154.990000    1.7325    36.000000   5.400000
99362    91.3400   1032.75    80.000000    3.4650   31.500000   7.875000
99498   141.4825   1850.75    75.000000   11.6325   195.000000  48.750000
99509   156.7125   3140.75   159.990000    2.7225    0.000000   0.000000

```

```

      vceovr_Mean  datovr_Mean  roam_Mean  change_mou  ...  forgntvl  ethnic  \
14      99.800000      0.0000    35.4975    -200.50  ...      0.0      N
20      72.450000      0.0000      0.0000   -1007.00  ...      0.0      Z
84       0.000000      1.8525      1.9200   -165.25  ...      0.0      S
85       8.500000      0.0000      0.0000   -343.00  ...      0.0      N
88       0.000000      0.0000      2.1150    299.00  ...      0.0      S
...
99286    63.216667      0.0000      3.6100   -616.00  ...      0.0      N
99297     5.400000      0.0000      0.0975    258.75  ...      0.0      J
99362     7.875000      0.0000      0.0000   -402.75  ...      0.0      N
99498    48.750000      0.0000      0.0000     16.25  ...      0.0      D
99509     0.000000      0.0000      0.0000   -201.75  ...      0.0      N

```

```

      kid0_2  kid3_5  kid6_10  kid11_15  kid16_17  creditcd  eqpdays  \
14          U      U      Y      U      U      Y      199.0
20          U      U      U      U      U      Y      143.0

```


84	U	U	U	U	U	Y	10.0
85	U	U	U	U	U	Y	175.0
88	U	U	U	U	U	Y	350.0
...
99286	U	U	U	U	U	Y	338.0
99297	U	U	U	U	U	Y	76.0
99362	U	U	U	U	U	Y	189.0
99498	U	U	Y	Y	U	Y	736.0
99509	U	U	U	U	U	Y	278.0

Customer_ID	
14	1000015
20	1000021
84	1000085
85	1000086
88	1000089
...	...
99286	1099287
99297	1099298
99362	1099363
99498	1099499
99509	1099510

[1532 rows x 100 columns]

Outliers in column 'peak_dat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
39	33.477500	195.50	29.9900	0.0000	0.250000	0.097500	
84	93.020000	1348.25	75.0000	0.0000	4.750000	1.852500	
101	114.132500	1649.75	83.0000	1.7325	51.500000	14.647500	
127	281.330000	3807.75	182.9375	8.4150	759.000000	88.500000	
186	29.887500	98.50	36.2850	0.0000	3.000000	1.102500	
...
99641	321.350000	1364.50	69.5850	2.9700	630.500000	248.450000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	
99793	28.500000	319.00	30.0000	0.0000	0.000000	0.000000	
99849	99.150000	927.50	70.0000	5.9400	32.000000	8.000000	
99872	534.930000	4719.00	10.0000	6.9300	2018.000000	515.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forntv1	ethnic	\
39	0.000000	0.0975	2.565	54.50	...	0.0	J	
84	0.000000	1.8525	1.920	-165.25	...	0.0	S	
101	1.875000	12.7725	0.000	-176.75	...	0.0	U	
127	88.425000	0.0750	0.000	5.25	...	0.0	N	
186	0.225000	0.8775	0.000	35.50	...	0.0	N	
...
99641	199.450000	49.0000	0.000	741.50	...	0.0	G	
99760	163.166667	0.3900	0.000	-1288.00	...	0.0	Z	
99793	0.000000	0.0000	0.000	11.00	...	0.0	N	
99849	8.000000	0.0000	15.210	-55.50	...	0.0	N	
99872	485.750000	29.2500	0.000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
39	U	U	U	Y	U	Y	179.0	
84	U	U	U	U	U	Y	10.0	
101	U	U	U	U	U	Y	306.0	
127	U	U	U	U	Y	Y	77.0	
186	U	U	U	U	U	Y	94.0	
...
99641	U	Y	Y	U	U	Y	45.0	
99760	U	U	U	U	U	Y	107.0	
99793	U	U	Y	Y	U	Y	101.0	
99849	U	U	U	U	U	Y	408.0	
99872	U	U	U	U	U	Y	62.0	

```

Customer_ID
39      1000040
84      1000085
101     1000102
127     1000128
186     1000187
...
99641   1099642
99760   1099761
99793   1099794
99849   1099850
99872   1099873

```

[2161 rows x 100 columns]

Outliers in column 'mou_peav_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
18	55.2700	1212.75	49.99	0.7425	0.00	0.0000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525	
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000	
...	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99537	149.2200	2032.00	97.49	5.4450	234.50	58.6250	
99717	197.9450	1118.50	50.00	5.4450	475.00	142.5000	
99721	52.0200	710.25	46.86	2.7225	0.00	0.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
18	0.000	0.0000	1.2850	169.25	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500	0.0000	0.0000	-343.00	...	0.0	N	
...	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N	
99537	58.625	0.0000	0.1600	442.00	...	0.0	U	
99717	142.500	0.0000	0.0000	30.50	...	0.0	N	
99721	0.000	0.0000	0.0000	-396.25	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
18	U	U	U	U	U	Y	408.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
...	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	
99717	U	Y	Y	Y	U	Y	917.0	
99721	U	U	U	U	U	Y	524.0	

```

Customer_ID
14      1000015
18      1000019
20      1000021
84      1000085
85      1000086
...
99498   1099499
99509   1099510
99537   1099538

```

99717 1099718
99721 1099722

[1705 rows x 100 columns]

Outliers in column 'mou_pead_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
39	33.477500	195.50	29.9900	0.0000	0.250000	0.097500	
84	93.020000	1348.25	75.0000	0.0000	4.750000	1.852500	
101	114.132500	1649.75	83.0000	1.7325	51.500000	14.647500	
127	281.330000	3807.75	182.9375	8.4150	759.000000	88.500000	
186	29.887500	98.50	36.2850	0.0000	3.000000	1.102500	
...	
99641	321.350000	1364.50	69.5850	2.9700	630.500000	248.450000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	
99793	28.500000	319.00	30.0000	0.0000	0.000000	0.000000	
99849	99.150000	927.50	70.0000	5.9400	32.000000	8.000000	
99872	534.930000	4719.00	10.0000	6.9300	2018.000000	515.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
39	0.000000	0.0975	2.565	54.50	...	0.0	J	
84	0.000000	1.8525	1.920	-165.25	...	0.0	S	
101	1.875000	12.7725	0.000	-176.75	...	0.0	U	
127	88.425000	0.0750	0.000	5.25	...	0.0	N	
186	0.225000	0.8775	0.000	35.50	...	0.0	N	
...	
99641	199.450000	49.0000	0.000	741.50	...	0.0	G	
99760	163.166667	0.3900	0.000	-1288.00	...	0.0	Z	
99793	0.000000	0.0000	0.000	11.00	...	0.0	N	
99849	8.000000	0.0000	15.210	-55.50	...	0.0	N	
99872	485.750000	29.2500	0.000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
39	U	U	U	Y	U	Y	179.0	
84	U	U	U	U	U	Y	10.0	
101	U	U	U	U	U	Y	306.0	
127	U	U	U	U	Y	Y	77.0	
186	U	U	U	U	U	Y	94.0	
...	
99641	U	Y	Y	U	U	Y	45.0	
99760	U	U	U	U	U	Y	107.0	
99793	U	U	Y	Y	U	Y	101.0	
99849	U	U	U	U	U	Y	408.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
39	1000040
84	1000085
101	1000102
127	1000128
186	1000187
...	...
99641	1099642
99760	1099761
99793	1099794
99849	1099850
99872	1099873

[2161 rows x 100 columns]

Outliers in column 'opk_vce_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
123	159.517500	2255.75	82.9900	3.2175	666.500000	66.650000	
127	281.330000	3807.75	182.9375	8.4150	759.000000	88.500000	
209	166.817500	3206.00	83.0000	3.9600	536.750000	53.675000	
246	135.150000	2489.25	84.9900	0.2475	443.250000	44.325000	

295	76.465000	1262.00	75.0000	0.0000	0.750000	0.292500
...
99510	84.712500	908.75	74.9900	0.4950	2.250000	0.877500
99537	149.220000	2032.00	97.4900	5.4450	234.500000	58.625000
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667
99852	37.030000	615.00	44.9900	0.9900	3.000000	1.050000
99872	534.930000	4719.00	10.0000	6.9300	2018.000000	515.000000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
123	66.650000	0.0000	0.585	-2238.75	...	0.0	H	
127	88.425000	0.0750	0.000	5.25	...	0.0	N	
209	53.675000	0.0000	15.855	265.00	...	0.0	H	
246	44.325000	0.0000	4.875	-1597.25	...	0.0	N	
295	0.000000	0.2925	0.000	-65.00	...	0.0	H	
...
99510	0.000000	0.8775	0.000	43.25	...	0.0	H	
99537	58.625000	0.0000	0.160	442.00	...	0.0	U	
99760	163.166667	0.3900	0.000	-1288.00	...	0.0	Z	
99852	1.050000	0.0000	0.000	0.00	...	0.0	H	
99872	485.750000	29.2500	0.000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
123	U	U	U	U	U	Y	318.0	
127	U	U	U	U	Y	Y	77.0	
209	Y	Y	Y	Y	U	Y	77.0	
246	U	U	U	U	U	Y	109.0	
295	U	U	U	U	U	Y	25.0	
...
99510	U	U	U	U	Y	Y	469.0	
99537	U	U	U	U	U	Y	250.0	
99760	U	U	U	U	U	Y	107.0	
99852	U	U	U	U	U	Y	140.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
123	1000124
127	1000128
209	1000210
246	1000247
295	1000296
...	...
99510	1099511
99537	1099538
99760	1099761
99852	1099853
99872	1099873

[2150 rows x 100 columns]

Outliers in column 'opk_dat_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
19	50.9650	162.00	69.9900	0.0000	2.50	0.9750	
92	72.8100	1306.00	77.8975	0.0000	0.00	0.0000	
101	114.1325	1649.75	83.0000	1.7325	51.50	14.6475	
127	281.3300	3807.75	182.9375	8.4150	759.00	88.5000	
186	29.8875	98.50	36.2850	0.0000	3.00	1.1025	
...
99544	101.4475	418.75	94.9900	1.4850	59.75	14.9725	
99641	321.3500	1364.50	69.5850	2.9700	630.50	248.4500	
99872	534.9300	4719.00	10.0000	6.9300	2018.00	515.0000	
99899	45.2600	149.00	44.4800	0.0000	2.00	0.7800	
99939	49.3625	187.75	40.0725	2.9700	18.00	6.3200	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
19	0.000	0.9750	0.0	-58.00	...	0.0	S	

92	0.000	0.0000	0.0	-462.00	...	0.0	O
101	1.875	12.7725	0.0	-176.75	...	0.0	U
127	88.425	0.0750	0.0	5.25	...	0.0	N
186	0.225	0.8775	0.0	35.50	...	0.0	N
...
99544	14.875	0.0975	0.0	-100.75	...	0.0	N
99641	199.450	49.0000	0.0	741.50	...	0.0	G
99872	485.750	29.2500	0.0	0.00	...	0.0	N
99899	0.000	0.7800	0.0	-86.00	...	0.0	N
99939	6.125	0.1950	0.0	-187.75	...	0.0	S

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
19	U	U	Y	Y	Y	N	253.0	
92	U	U	U	U	U	Y	146.0	
101	U	U	U	U	U	Y	306.0	
127	U	U	U	U	Y	Y	77.0	
186	U	U	U	U	U	Y	94.0	
...	
99544	U	U	U	U	U	Y	273.0	
99641	U	Y	Y	U	U	Y	45.0	
99872	U	U	U	U	U	Y	62.0	
99899	U	U	U	U	Y	Y	75.0	
99939	U	U	U	U	U	Y	153.0	

	Customer_ID
19	1000020
92	1000093
101	1000102
127	1000128
186	1000187
...	...
99544	1099545
99641	1099642
99872	1099873
99899	1099900
99939	1099940

[2177 rows x 100 columns]

Outliers in column 'mou_opkv_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.9900	2.2275	249.500000	99.800000	
48	107.235000	782.00	24.9900	0.0000	232.750000	86.117500	
83	55.190000	1087.75	69.9900	0.0000	13.000000	5.200000	
92	72.810000	1306.00	77.8975	0.0000	0.000000	0.000000	
98	103.282500	1376.00	84.9900	0.7425	38.000000	15.200000	
...	
99509	156.712500	3140.75	159.9900	2.7225	0.000000	0.000000	
99537	149.220000	2032.00	97.4900	5.4450	234.500000	58.625000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	
99852	37.030000	615.00	44.9900	0.9900	3.000000	1.050000	
99876	45.490000	648.00	44.9900	0.0000	30.000000	10.500000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.00	35.4975	-200.50	...	0.0	N	
48	86.117500	0.00	0.0000	-258.00	...	0.0	N	
83	5.200000	0.00	0.0000	109.25	...	1.0	U	
92	0.000000	0.00	0.0000	-462.00	...	0.0	O	
98	15.200000	0.00	7.6625	355.00	...	0.0	N	
...	
99509	0.000000	0.00	0.0000	-201.75	...	0.0	N	
99537	58.625000	0.00	0.1600	442.00	...	0.0	U	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99852	1.050000	0.00	0.0000	0.00	...	0.0	H	
99876	10.500000	0.00	0.0000	0.00	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
48	U	Y	Y	Y	Y	Y	162.0	
83	U	U	U	U	U	Y	233.0	
92	U	U	U	U	U	Y	146.0	
98	U	U	U	Y	Y	Y	652.0	
...	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	
99760	U	U	U	U	U	Y	107.0	
99852	U	U	U	U	U	Y	140.0	
99876	U	U	U	U	Y	Y	351.0	

	Customer_ID
14	1000015
48	1000049
83	1000084
92	1000093
98	1000099
...	...
99509	1099510
99537	1099538
99760	1099761
99852	1099853
99876	1099877

[2418 rows x 100 columns]

Outliers in column 'mou_opkd_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
19	50.9650	162.00	69.9900	0.0000	2.50	0.9750	
92	72.8100	1306.00	77.8975	0.0000	0.00	0.0000	
101	114.1325	1649.75	83.0000	1.7325	51.50	14.6475	
127	281.3300	3807.75	182.9375	8.4150	759.00	88.5000	
186	29.8875	98.50	36.2850	0.0000	3.00	1.1025	
...	
99544	101.4475	418.75	94.9900	1.4850	59.75	14.9725	
99641	321.3500	1364.50	69.5850	2.9700	630.50	248.4500	
99872	534.9300	4719.00	10.0000	6.9300	2018.00	515.0000	
99899	45.2600	149.00	44.4800	0.0000	2.00	0.7800	
99939	49.3625	187.75	40.0725	2.9700	18.00	6.3200	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
19	0.000	0.9750	0.0	-58.00	...	0.0	S	
92	0.000	0.0000	0.0	-462.00	...	0.0	O	
101	1.875	12.7725	0.0	-176.75	...	0.0	U	
127	88.425	0.0750	0.0	5.25	...	0.0	N	
186	0.225	0.8775	0.0	35.50	...	0.0	N	
...	
99544	14.875	0.0975	0.0	-100.75	...	0.0	N	
99641	199.450	49.0000	0.0	741.50	...	0.0	G	
99872	485.750	29.2500	0.0	0.00	...	0.0	N	
99899	0.000	0.7800	0.0	-86.00	...	0.0	N	
99939	6.125	0.1950	0.0	-187.75	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
19	U	U	Y	Y	Y	N	253.0	
92	U	U	U	U	U	Y	146.0	
101	U	U	U	U	U	Y	306.0	
127	U	U	U	U	Y	Y	77.0	
186	U	U	U	U	U	Y	94.0	
...	
99544	U	U	U	U	U	Y	273.0	
99641	U	Y	Y	U	U	Y	45.0	

99872	U	U	U	U	U	Y	62.0
99899	U	U	U	U	Y	Y	75.0
99939	U	U	U	U	U	Y	153.0

	Customer_ID
19	1000020
92	1000093
101	1000102
127	1000128
186	1000187
...	...
99544	1099545
99641	1099642
99872	1099873
99899	1099900
99939	1099940

[2177 rows x 100 columns]

Outliers in column 'drop_blk_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
20	172.4400	1978.00	99.9900	0.0000	362.25	72.4500	
127	281.3300	3807.75	182.9375	8.4150	759.00	88.5000	
158	83.8250	790.50	75.0000	4.9500	0.00	0.0000	
164	75.8750	1060.75	75.0000	0.0000	0.00	0.0000	
175	109.4650	2297.75	84.9900	4.9500	231.75	23.1750	
...	
99199	97.2875	1382.50	94.9900	0.0000	86.25	21.5625	
99297	237.7525	2495.25	154.9900	1.7325	36.00	5.4000	
99509	156.7125	3140.75	159.9900	2.7225	0.00	0.0000	
99537	149.2200	2032.00	97.4900	5.4450	234.50	58.6250	
99849	99.1500	927.50	70.0000	5.9400	32.00	8.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
20	72.4500	0.000	0.0000	-1007.00	...	0.0	Z	
127	88.4250	0.075	0.0000	5.25	...	0.0	N	
158	0.0000	0.000	0.0000	-60.50	...	0.0	G	
164	0.0000	0.000	0.0000	100.25	...	0.0	G	
175	23.1750	0.000	0.0000	-129.75	...	0.0	N	
...	
99199	21.5625	0.000	0.0000	-302.50	...	0.0	N	
99297	5.4000	0.000	0.0975	258.75	...	0.0	J	
99509	0.0000	0.000	0.0000	-201.75	...	0.0	N	
99537	58.6250	0.000	0.1600	442.00	...	0.0	U	
99849	8.0000	0.000	15.2100	-55.50	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
20	U	U	U	U	U	Y	143.0	
127	U	U	U	U	Y	Y	77.0	
158	U	U	Y	Y	Y	Y	638.0	
164	Y	Y	U	U	U	Y	206.0	
175	U	U	U	U	U	Y	153.0	
...	
99199	U	Y	Y	U	U	Y	429.0	
99297	U	U	U	U	U	Y	76.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
20	1000021
127	1000128
158	1000159
164	1000165
175	1000176

```
...
99199      1099200
99297      1099298
99509      1099510
99537      1099538
99849      1099850
```

[1919 rows x 100 columns]

Outliers in column 'attempt_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525	
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000	
101	114.1325	1649.75	83.00	1.7325	51.50	14.6475	
109	94.9250	1655.75	75.00	1.4850	25.50	2.5500	
...	
99199	97.2875	1382.50	94.99	0.0000	86.25	21.5625	
99297	237.7525	2495.25	154.99	1.7325	36.00	5.4000	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99537	149.2200	2032.00	97.49	5.4450	234.50	58.6250	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
20	72.4500	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.0000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.5000	0.0000	0.0000	-343.00	...	0.0	N	
101	1.8750	12.7725	0.0000	-176.75	...	0.0	U	
109	2.5500	0.0000	0.0000	-51.75	...	0.0	J	
...	
99199	21.5625	0.0000	0.0000	-302.50	...	0.0	N	
99297	5.4000	0.0000	0.0975	258.75	...	0.0	J	
99498	48.7500	0.0000	0.0000	16.25	...	0.0	D	
99509	0.0000	0.0000	0.0000	-201.75	...	0.0	N	
99537	58.6250	0.0000	0.1600	442.00	...	0.0	U	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
101	U	U	U	U	U	Y	306.0	
109	U	U	U	Y	Y	Y	314.0	
...	
99199	U	Y	Y	U	U	Y	429.0	
99297	U	U	U	U	U	Y	76.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	

	Customer_ID
20	1000021
84	1000085
85	1000086
101	1000102
109	1000110
...	...
99199	1099200
99297	1099298
99498	1099499
99509	1099510
99537	1099538

[1429 rows x 100 columns]

Outliers in column 'complete_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
--	----------	----------	-------------	---------	-------------	-------------	---

14	212.5150	1971.50	84.99	2.2275	249.50	99.8000
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000
101	114.1325	1649.75	83.00	1.7325	51.50	14.6475
...
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000
99537	149.2200	2032.00	97.49	5.4450	234.50	58.6250
99852	37.0300	615.00	44.99	0.9900	3.00	1.0500
99872	534.9300	4719.00	10.00	6.9300	2018.00	515.0000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic \
14	99.800	0.0000	35.4975	-200.50	...	0.0	N
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z
84	0.000	1.8525	1.9200	-165.25	...	0.0	S
85	8.500	0.0000	0.0000	-343.00	...	0.0	N
101	1.875	12.7725	0.0000	-176.75	...	0.0	U
...
99498	48.750	0.0000	0.0000	16.25	...	0.0	D
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N
99537	58.625	0.0000	0.1600	442.00	...	0.0	U
99852	1.050	0.0000	0.0000	0.00	...	0.0	H
99872	485.750	29.2500	0.0000	0.00	...	0.0	N

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays \
14	U	U	Y	U	U	Y	199.0
20	U	U	U	U	U	Y	143.0
84	U	U	U	U	U	Y	10.0
85	U	U	U	U	U	Y	175.0
101	U	U	U	U	U	Y	306.0
...
99498	U	U	Y	Y	U	Y	736.0
99509	U	U	U	U	U	Y	278.0
99537	U	U	U	U	U	Y	250.0
99852	U	U	U	U	U	Y	140.0
99872	U	U	U	U	U	Y	62.0

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
101	1000102
...	...
99498	1099499
99509	1099510
99537	1099538
99852	1099853
99872	1099873

[1410 rows x 100 columns]

Outliers in column 'callfwdv_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean \
1053	57.6350	218.25	55.0000	0.2475	0.00	0.0000
1352	43.3175	340.25	37.4900	0.2475	0.00	0.0000
1437	51.2125	312.00	35.0000	0.2475	37.25	11.1750
2005	79.7350	642.75	39.9900	2.4750	83.00	29.0500
2497	138.6975	1849.25	119.9900	5.4450	80.75	12.1125
...
93884	47.2550	354.75	49.9900	0.2475	0.50	0.2000
94076	100.2150	1599.50	94.9900	0.0000	43.50	15.2250
94282	40.4850	862.25	49.9900	0.4950	0.00	0.0000
96399	148.8800	1140.50	58.9425	5.1975	143.00	57.2000

96790 39.9900 755.25 39.9900 0.0000 0.00 0.0000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
1053	0.0000	0.0	0.0000	-123.25	...	0.0	N	
1352	0.0000	0.0	0.0000	-253.25	...	0.0	S	
1437	11.1750	0.0	0.0000	-149.00	...	1.0	H	
2005	29.0500	0.0	0.0000	94.25	...	0.0	H	
2497	12.1125	0.0	0.0000	-229.25	...	0.0	S	
...	
93884	0.2000	0.0	0.5175	-260.75	...	0.0	N	
94076	15.2250	0.0	0.0000	296.50	...	0.0	S	
94282	0.0000	0.0	0.0000	-243.25	...	0.0	N	
96399	57.2000	0.0	34.7900	-625.50	...	0.0	D	
96790	0.0000	0.0	0.0000	-144.25	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
1053	U	U	U	U	U	Y	284.0	
1352	U	U	U	U	U	Y	842.0	
1437	Y	U	U	U	U	Y	212.0	
2005	U	U	U	U	U	Y	323.0	
2497	U	U	U	U	U	Y	50.0	
...	
93884	U	U	U	U	U	Y	126.0	
94076	U	U	U	Y	U	Y	70.0	
94282	U	U	U	Y	U	Y	269.0	
96399	U	U	U	U	U	Y	214.0	
96790	U	U	U	U	U	Y	-4.0	

	Customer_ID
1053	1001054
1352	1001353
1437	1001438
2005	1002006
2497	1002498
...	...
93884	1093885
94076	1094077
94282	1094283
96399	1096400
96790	1096791

[94 rows x 100 columns]

Outliers in column 'callwait_Mean':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
18	55.270000	1212.75	49.99	0.7425	0.000000	0.000000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
26	51.025000	382.25	48.79	1.4850	0.750000	0.075000	
47	78.287500	851.50	85.00	0.0000	0.000000	0.000000	
84	93.020000	1348.25	75.00	0.0000	4.750000	1.852500	
...	
99717	197.945000	1118.50	50.00	5.4450	475.000000	142.500000	
99721	52.020000	710.25	46.86	2.7225	0.000000	0.000000	
99739	47.420000	565.25	30.00	0.4950	47.500000	16.625000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99849	99.150000	927.50	70.00	5.9400	32.000000	8.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
18	0.000000	0.0000	1.285	169.25	...	0.0	N	
20	72.450000	0.0000	0.000	-1007.00	...	0.0	Z	
26	0.075000	0.0000	0.000	226.75	...	0.0	N	
47	0.000000	0.0000	0.000	-205.50	...	0.0	H	
84	0.000000	1.8525	1.920	-165.25	...	0.0	S	
...	
99717	142.500000	0.0000	0.000	30.50	...	0.0	N	

99721	0.000000	0.0000	0.000	-396.25	...	0.0	S
99739	16.625000	0.0000	0.000	-236.25	...	0.0	S
99760	163.166667	0.3900	0.000	-1288.00	...	0.0	Z
99849	8.000000	0.0000	15.210	-55.50	...	0.0	N

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
18	U	U	U	U	U	Y	408.0	
20	U	U	U	U	U	Y	143.0	
26	U	U	U	U	Y	Y	265.0	
47	U	U	U	U	U	Y	151.0	
84	U	U	U	U	U	Y	10.0	
...	
99717	U	Y	Y	Y	U	Y	917.0	
99721	U	U	U	U	U	Y	524.0	
99739	U	U	U	U	U	Y	495.0	
99760	U	U	U	U	U	Y	107.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
18	1000019
20	1000021
26	1000027
47	1000048
84	1000085
...	...
99717	1099718
99721	1099722
99739	1099740
99760	1099761
99849	1099850

[3268 rows x 100 columns]

Outliers in column 'months':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
0	23.9975	219.25	22.5000	0.2475	0.00	0.0000	
4	55.2300	570.50	71.9800	0.0000	0.00	0.0000	
9	31.6625	25.50	29.9900	0.2475	0.00	0.0000	
14	212.5150	1971.50	84.9900	2.2275	249.50	99.8000	
16	63.0175	440.25	59.9800	0.0000	5.75	1.7250	
...	
98071	482.0000	3800.00	148.4500	5.1975	827.25	286.5875	
98082	73.0650	603.00	39.1875	0.2475	142.75	43.0050	
98134	53.2250	244.25	40.0000	0.0000	0.00	0.0000	
98159	22.4950	74.75	24.9900	1.9800	0.00	0.0000	
98170	30.0975	192.75	30.0000	0.0000	0.00	0.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
0	0.000	0.0000	0.0000	-157.25	...	0.0	N	
4	0.000	0.0000	0.0000	38.50	...	0.0	I	
9	0.000	0.0000	0.0000	59.50	...	1.0	N	
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
16	1.725	0.0000	1.3125	-16.25	...	0.0	N	
...	
98071	285.800	0.7875	1.3650	345.00	...	0.0	H	
98082	42.225	0.7800	0.0000	-603.00	...	0.0	U	
98134	0.000	0.0000	0.0000	-96.25	...	0.0	N	
98159	0.000	0.0000	0.0000	-24.75	...	0.0	I	
98170	0.000	0.0000	0.0975	64.25	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
0	U	U	U	U	U	Y	361.0	
4	U	U	U	U	U	Y	434.0	
9	U	U	U	U	U	Y	601.0	
14	U	U	Y	U	U	Y	199.0	

16	U	U	U	U	U	Y	530.0
...
98071	U	U	U	U	U	Y	-1.0
98082	U	U	U	U	U	Y	274.0
98134	U	U	U	U	U	Y	110.0
98159	U	U	U	U	U	Y	756.0
98170	U	U	U	U	U	Y	776.0

	Customer_ID
0	1000001
4	1000005
9	1000010
14	1000015
16	1000017
...	...
98071	1098072
98082	1098083
98134	1098135
98159	1098160
98170	1098171

[585 rows x 100 columns]

Outliers in column 'uniqusubs':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
101	114.1325	1649.75	83.00	1.7325	51.50	14.6475	
240	47.5000	255.50	50.00	0.0000	0.00	0.0000	
256	78.6375	960.75	75.00	0.2475	0.00	0.0000	
...
98997	27.7375	148.50	32.49	0.2475	0.00	0.0000	
99074	51.1500	209.25	50.00	0.9900	0.00	0.0000	
99161	53.9500	691.75	69.99	3.9600	0.00	0.0000	
99196	91.2800	945.00	84.99	0.0000	0.00	0.0000	
99575	17.1925	313.75	10.00	2.2275	9.75	3.9000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
47	0.000	0.0000	0.0000	-205.50	...	0.0	H	
101	1.875	12.7725	0.0000	-176.75	...	0.0	U	
240	0.000	0.0000	0.0000	-182.50	...	1.0	N	
256	0.000	0.0000	0.3900	-54.75	...	0.0	U	
...
98997	0.000	0.0000	0.0000	23.50	...	0.0	O	
99074	0.000	0.0000	0.1600	94.75	...	1.0	N	
99161	0.000	0.0000	0.0000	-321.75	...	0.0	N	
99196	0.000	0.0000	1.7200	-274.00	...	1.0	O	
99575	3.900	0.0000	1.0650	179.25	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
47	U	U	U	U	U	Y	151.0	
101	U	U	U	U	U	Y	306.0	
240	U	U	U	U	U	Y	1088.0	
256	U	U	Y	U	U	Y	643.0	
...
98997	U	Y	U	U	U	Y	530.0	
99074	U	Y	Y	U	U	Y	344.0	
99161	U	U	U	U	Y	Y	351.0	
99196	U	Y	U	U	U	Y	557.0	
99575	U	U	U	Y	Y	Y	238.0	

	Customer_ID
14	1000015

```

47      1000048
101     1000102
240     1000241
256     1000257
...     ...
98997   1098998
99074   1099075
99161   1099162
99196   1099197
99575   1099576

```

[1118 rows x 100 columns]

Outliers in column 'actvsbs':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
101	114.1325	1649.75	83.00	1.7325	51.50	14.6475	
240	47.5000	255.50	50.00	0.0000	0.00	0.0000	
256	78.6375	960.75	75.00	0.2475	0.00	0.0000	
314	86.2500	0.00	83.00	0.0000	0.00	0.0000	
...	
98491	131.3475	1194.50	84.99	0.4950	160.00	63.9800	
98652	72.9450	2712.00	10.00	2.9700	372.50	56.7250	
98997	27.7375	148.50	32.49	0.2475	0.00	0.0000	
99074	51.1500	209.25	50.00	0.9900	0.00	0.0000	
99575	17.1925	313.75	10.00	2.2275	9.75	3.9000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
47	0.000	0.0000	0.0000	-205.50	...	0.0	H	
101	1.875	12.7725	0.0000	-176.75	...	0.0	U	
240	0.000	0.0000	0.0000	-182.50	...	1.0	N	
256	0.000	0.0000	0.3900	-54.75	...	0.0	U	
314	0.000	0.0000	0.0000	0.00	...	0.0	H	
...	
98491	63.200	0.7800	1.6575	189.50	...	0.0	N	
98652	56.725	0.0000	0.0000	24.00	...	0.0	N	
98997	0.000	0.0000	0.0000	23.50	...	0.0	O	
99074	0.000	0.0000	0.1600	94.75	...	1.0	N	
99575	3.900	0.0000	1.0650	179.25	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
47	U	U	U	U	U	Y	151.0	
101	U	U	U	U	U	Y	306.0	
240	U	U	U	U	U	Y	1088.0	
256	U	U	Y	U	U	Y	643.0	
314	U	U	U	U	U	Y	468.0	
...	
98491	U	Y	U	U	U	Y	140.0	
98652	U	Y	Y	Y	U	Y	279.0	
98997	U	Y	U	U	U	Y	530.0	
99074	U	Y	Y	U	U	Y	344.0	
99575	U	U	U	Y	Y	Y	238.0	

```

Customer_ID
47      1000048
101     1000102
240     1000241
256     1000257
314     1000315
...     ...
98491   1098492
98652   1098653
98997   1098998
99074   1099075
99575   1099576

```

[422 rows x 100 columns]

Outliers in column 'totcalls':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
18	55.2700	1212.75	49.99	0.7425	0.00	0.0000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
26	51.0250	382.25	48.79	1.4850	0.75	0.0750	
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
...	
99373	91.3350	580.50	32.49	0.4950	192.00	58.2525	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99510	84.7125	908.75	74.99	0.4950	2.25	0.8775	
99872	534.9300	4719.00	10.00	6.9300	2018.00	515.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
18	0.000	0.0000	1.2850	169.25	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
26	0.075	0.0000	0.0000	226.75	...	0.0	N	
47	0.000	0.0000	0.0000	-205.50	...	0.0	H	
...	
99373	55.425	2.8275	0.0975	-580.50	...	0.0	N	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N	
99510	0.000	0.8775	0.0000	43.25	...	0.0	H	
99872	485.750	29.2500	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
18	U	U	U	U	U	Y	408.0	
20	U	U	U	U	U	Y	143.0	
26	U	U	U	U	Y	Y	265.0	
47	U	U	U	U	U	Y	151.0	
...	
99373	U	U	U	U	U	Y	317.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99510	U	U	U	U	Y	Y	469.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
14	1000015
18	1000019
20	1000021
26	1000027
47	1000048
...	...
99373	1099374
99498	1099499
99509	1099510
99510	1099511
99872	1099873

[1977 rows x 100 columns]

Outliers in column 'totmou':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
18	55.2700	1212.75	49.99	0.7425	0.00	0.0000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
26	51.0250	382.25	48.79	1.4850	0.75	0.0750	
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
...	

99362	91.3400	1032.75	80.00	3.4650	31.50	7.8750
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000
99510	84.7125	908.75	74.99	0.4950	2.25	0.8775
99721	52.0200	710.25	46.86	2.7225	0.00	0.0000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
18	0.000	0.0000	1.2850	169.25	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
26	0.075	0.0000	0.0000	226.75	...	0.0	N	
47	0.000	0.0000	0.0000	-205.50	...	0.0	H	
...
99362	7.875	0.0000	0.0000	-402.75	...	0.0	N	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N	
99510	0.000	0.8775	0.0000	43.25	...	0.0	H	
99721	0.000	0.0000	0.0000	-396.25	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
18	U	U	U	U	U	Y	408.0	
20	U	U	U	U	U	Y	143.0	
26	U	U	U	U	Y	Y	265.0	
47	U	U	U	U	U	Y	151.0	
...
99362	U	U	U	U	U	Y	189.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99510	U	U	U	U	Y	Y	469.0	
99721	U	U	U	U	U	Y	524.0	

	Customer_ID
14	1000015
18	1000019
20	1000021
26	1000027
47	1000048
...	...
99362	1099363
99498	1099499
99509	1099510
99510	1099511
99721	1099722

[1766 rows x 100 columns]

Outliers in column 'totrev':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
26	51.025000	382.25	48.79	1.4850	0.750000	0.075000	
40	82.162500	660.00	50.00	0.0000	100.750000	30.225000	
47	78.287500	851.50	85.00	0.0000	0.000000	0.000000	
...
99364	234.342500	1056.50	44.99	0.9900	566.750000	198.362500	
99498	141.482500	1850.75	75.00	11.6325	195.000000	48.750000	
99509	156.712500	3140.75	159.99	2.7225	0.000000	0.000000	
99510	84.712500	908.75	74.99	0.4950	2.250000	0.877500	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450000	0.0000	0.0000	-1007.00	...	0.0	Z	
26	0.075000	0.0000	0.0000	226.75	...	0.0	N	

40	30.225000	0.0000	1.9375	-184.00	...	0.0	N
47	0.000000	0.0000	0.0000	-205.50	...	0.0	H
...
99364	198.362500	0.0000	0.0000	290.50	...	0.0	H
99498	48.750000	0.0000	0.0000	16.25	...	0.0	D
99509	0.000000	0.0000	0.0000	-201.75	...	0.0	N
99510	0.000000	0.8775	0.0000	43.25	...	0.0	H
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
26	U	U	U	U	Y	Y	265.0	
40	U	U	U	Y	U	Y	107.0	
47	U	U	U	U	U	Y	151.0	
...	
99364	U	U	U	U	U	Y	971.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99510	U	U	U	U	Y	Y	469.0	
99760	U	U	U	U	U	Y	107.0	

	Customer_ID
14	1000015
20	1000021
26	1000027
40	1000041
47	1000048
...	...
99364	1099365
99498	1099499
99509	1099510
99510	1099511
99760	1099761

[1538 rows x 100 columns]

Outliers in column 'adjrev':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
26	51.025000	382.25	48.79	1.4850	0.750000	0.075000	
40	82.162500	660.00	50.00	0.0000	100.750000	30.225000	
47	78.287500	851.50	85.00	0.0000	0.000000	0.000000	
...	
99480	153.070000	165.00	84.99	0.0000	1.500000	0.585000	
99498	141.482500	1850.75	75.00	11.6325	195.000000	48.750000	
99509	156.712500	3140.75	159.99	2.7225	0.000000	0.000000	
99510	84.712500	908.75	74.99	0.4950	2.250000	0.877500	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450000	0.0000	0.0000	-1007.00	...	0.0	Z	
26	0.075000	0.0000	0.0000	226.75	...	0.0	N	
40	30.225000	0.0000	1.9375	-184.00	...	0.0	N	
47	0.000000	0.0000	0.0000	-205.50	...	0.0	H	
...	
99480	0.000000	0.5850	0.0000	381.00	...	0.0	G	
99498	48.750000	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000000	0.0000	0.0000	-201.75	...	0.0	N	
99510	0.000000	0.8775	0.0000	43.25	...	0.0	H	
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
--	--------	--------	---------	----------	----------	----------	---------	---

14	U	U	Y	U	U	Y	199.0
20	U	U	U	U	U	Y	143.0
26	U	U	U	U	Y	Y	265.0
40	U	U	U	Y	U	Y	107.0
47	U	U	U	U	U	Y	151.0
...
99480	U	U	U	U	U	Y	9.0
99498	U	U	Y	Y	U	Y	736.0
99509	U	U	U	U	U	Y	278.0
99510	U	U	U	U	Y	Y	469.0
99760	U	U	U	U	U	Y	107.0

Customer_ID	
14	1000015
20	1000021
26	1000027
40	1000041
47	1000048
...	...
99480	1099481
99498	1099499
99509	1099510
99510	1099511
99760	1099761

[1542 rows x 100 columns]

Outliers in column 'adjmou':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
18	55.2700	1212.75	49.99	0.7425	0.00	0.0000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
26	51.0250	382.25	48.79	1.4850	0.75	0.0750	
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
...	
99362	91.3400	1032.75	80.00	3.4650	31.50	7.8750	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99510	84.7125	908.75	74.99	0.4950	2.25	0.8775	
99721	52.0200	710.25	46.86	2.7225	0.00	0.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
18	0.000	0.0000	1.2850	169.25	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
26	0.075	0.0000	0.0000	226.75	...	0.0	N	
47	0.000	0.0000	0.0000	-205.50	...	0.0	H	
...	
99362	7.875	0.0000	0.0000	-402.75	...	0.0	N	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N	
99510	0.000	0.8775	0.0000	43.25	...	0.0	H	
99721	0.000	0.0000	0.0000	-396.25	...	0.0	S	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
18	U	U	U	U	U	Y	408.0	
20	U	U	U	U	U	Y	143.0	
26	U	U	U	U	Y	Y	265.0	
47	U	U	U	U	U	Y	151.0	
...	
99362	U	U	U	U	U	Y	189.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99510	U	U	U	U	Y	Y	469.0	

99721 U U U U U Y 524.0

Customer_ID

14 1000015
18 1000019
20 1000021
26 1000027
47 1000048
... ...
99362 1099363
99498 1099499
99509 1099510
99510 1099511
99721 1099722

[1766 rows x 100 columns]

Outliers in column 'adjqty':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
18	55.2700	1212.75	49.99	0.7425	0.00	0.0000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
26	51.0250	382.25	48.79	1.4850	0.75	0.0750	
47	78.2875	851.50	85.00	0.0000	0.00	0.0000	
...	
99373	91.3350	580.50	32.49	0.4950	192.00	58.2525	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99510	84.7125	908.75	74.99	0.4950	2.25	0.8775	
99872	534.9300	4719.00	10.00	6.9300	2018.00	515.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
18	0.000	0.0000	1.2850	169.25	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
26	0.075	0.0000	0.0000	226.75	...	0.0	N	
47	0.000	0.0000	0.0000	-205.50	...	0.0	H	
...	
99373	55.425	2.8275	0.0975	-580.50	...	0.0	N	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N	
99510	0.000	0.8775	0.0000	43.25	...	0.0	H	
99872	485.750	29.2500	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
18	U	U	U	U	U	Y	408.0	
20	U	U	U	U	U	Y	143.0	
26	U	U	U	U	Y	Y	265.0	
47	U	U	U	U	U	Y	151.0	
...	
99373	U	U	U	U	U	Y	317.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99510	U	U	U	U	Y	Y	469.0	
99872	U	U	U	U	U	Y	62.0	

Customer_ID

14 1000015
18 1000019
20 1000021
26 1000027
47 1000048
... ...
99373 1099374

99498 1099499
 99509 1099510
 99510 1099511
 99872 1099873

[1970 rows x 100 columns]

Outliers in column 'avgrev':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.9900	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.9900	0.0000	362.250000	72.450000	
114	113.522500	1807.25	85.0000	1.9800	102.000000	10.200000	
123	159.517500	2255.75	82.9900	3.2175	666.500000	66.650000	
127	281.330000	3807.75	182.9375	8.4150	759.000000	88.500000	
...	
99498	141.482500	1850.75	75.0000	11.6325	195.000000	48.750000	
99509	156.712500	3140.75	159.9900	2.7225	0.000000	0.000000	
99717	197.945000	1118.50	50.0000	5.4450	475.000000	142.500000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	
99849	99.150000	927.50	70.0000	5.9400	32.000000	8.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.000	35.4975	-200.50	...	0.0	N	
20	72.450000	0.000	0.0000	-1007.00	...	0.0	Z	
114	10.200000	0.000	1.0025	-373.25	...	0.0	N	
123	66.650000	0.000	0.5850	-2238.75	...	0.0	H	
127	88.425000	0.075	0.0000	5.25	...	0.0	N	
...	
99498	48.750000	0.000	0.0000	16.25	...	0.0	D	
99509	0.000000	0.000	0.0000	-201.75	...	0.0	N	
99717	142.500000	0.000	0.0000	30.50	...	0.0	N	
99760	163.166667	0.390	0.0000	-1288.00	...	0.0	Z	
99849	8.000000	0.000	15.2100	-55.50	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
114	U	U	U	U	U	Y	387.0	
123	U	U	U	U	U	Y	318.0	
127	U	U	U	U	Y	Y	77.0	
...	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99717	U	Y	Y	Y	U	Y	917.0	
99760	U	U	U	U	U	Y	107.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
14	1000015
20	1000021
114	1000115
123	1000124
127	1000128
...	...
99498	1099499
99509	1099510
99717	1099718
99760	1099761
99849	1099850

[1510 rows x 100 columns]

Outliers in column 'avgmou':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	\
14	212.515000	1971.500000	84.9900	2.2275	249.500000	
20	172.440000	1978.000000	99.9900	0.0000	362.250000	

85	97.590000	1804.000000	75.0000	1.4850	85.000000
92	72.810000	1306.000000	77.8975	0.0000	0.000000
101	114.132500	1649.750000	83.0000	1.7325	51.500000
...
99163	193.956667	1502.000000	84.1400	1.3200	429.333333
99204	105.530000	1179.333333	96.9900	4.2900	14.666667
99255	46.682500	535.500000	85.4900	6.1875	0.000000
99498	141.482500	1850.750000	75.0000	11.6325	195.000000
99509	156.712500	3140.750000	159.9900	2.7225	0.000000

	ovrrev_Mean	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	\
14	99.800000	99.800000	0.0000	35.4975	-200.500000	...	
20	72.450000	72.450000	0.0000	0.0000	-1007.000000	...	
85	8.500000	8.500000	0.0000	0.0000	-343.000000	...	
92	0.000000	0.000000	0.0000	0.0000	-462.000000	...	
101	14.647500	1.875000	12.7725	0.0000	-176.750000	...	
...	
99163	107.333333	107.333333	0.0000	0.0000	387.000000	...	
99204	3.666667	3.666667	0.0000	0.0000	-178.333333	...	
99255	0.000000	0.000000	0.0000	0.0000	150.500000	...	
99498	48.750000	48.750000	0.0000	0.0000	16.250000	...	
99509	0.000000	0.000000	0.0000	0.0000	-201.750000	...	

	forgntvl	ethnic	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	\
14	0.0	N	U	U	Y	U	U	
20	0.0	Z	U	U	U	U	U	
85	0.0	N	U	U	U	U	U	
92	0.0	O	U	U	U	U	U	
101	0.0	U	U	U	U	U	U	
...	
99163	0.0	N	U	U	U	U	U	
99204	0.0	N	U	Y	U	U	U	
99255	0.0	U	U	U	U	Y	U	
99498	0.0	D	U	U	Y	Y	U	
99509	0.0	N	U	U	U	U	U	

	creditcd	eqpdays	Customer_ID
14	Y	199.0	1000015
20	Y	143.0	1000021
85	Y	175.0	1000086
92	Y	146.0	1000093
101	Y	306.0	1000102
...
99163	Y	224.0	1099164
99204	Y	185.0	1099205
99255	Y	606.0	1099256
99498	Y	736.0	1099499
99509	Y	278.0	1099510

[1466 rows x 100 columns]

Outliers in column 'avgqty':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525	
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000	
88	79.5950	828.00	75.00	0.0000	0.00	0.0000	
...	
99255	46.6825	535.50	85.49	6.1875	0.00	0.0000	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99510	84.7125	908.75	74.99	0.4950	2.25	0.8775	
99872	534.9300	4719.00	10.00	6.9300	2018.00	515.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
14	99.80	0.0000	35.4975	-200.50	...	0.0	N	
20	72.45	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.00	1.8525	1.9200	-165.25	...	0.0	S	
85	8.50	0.0000	0.0000	-343.00	...	0.0	N	
88	0.00	0.0000	2.1150	299.00	...	0.0	S	
...	
99255	0.00	0.0000	0.0000	150.50	...	0.0	U	
99498	48.75	0.0000	0.0000	16.25	...	0.0	D	
99509	0.00	0.0000	0.0000	-201.75	...	0.0	N	
99510	0.00	0.8775	0.0000	43.25	...	0.0	H	
99872	485.75	29.2500	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
88	U	U	U	U	U	Y	350.0	
...	
99255	U	U	U	Y	U	Y	606.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99510	U	U	U	U	Y	Y	469.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
88	1000089
...	...
99255	1099256
99498	1099499
99509	1099510
99510	1099511
99872	1099873

[1552 rows x 100 columns]

Outliers in column 'avg3mou':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.9900	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.9900	0.0000	362.250000	72.450000	
84	93.020000	1348.25	75.0000	0.0000	4.750000	1.852500	
85	97.590000	1804.00	75.0000	1.4850	85.000000	8.500000	
92	72.810000	1306.00	77.8975	0.0000	0.000000	0.000000	
...	
99297	237.752500	2495.25	154.9900	1.7325	36.000000	5.400000	
99498	141.482500	1850.75	75.0000	11.6325	195.000000	48.750000	
99509	156.712500	3140.75	159.9900	2.7225	0.000000	0.000000	
99537	149.220000	2032.00	97.4900	5.4450	234.500000	58.625000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
14	99.800000	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450000	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.000000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500000	0.0000	0.0000	-343.00	...	0.0	N	
92	0.000000	0.0000	0.0000	-462.00	...	0.0	O	
...	
99297	5.400000	0.0000	0.0975	258.75	...	0.0	J	
99498	48.750000	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000000	0.0000	0.0000	-201.75	...	0.0	N	

99537	58.625000	0.0000	0.1600	442.00	...	0.0	U
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
92	U	U	U	U	U	Y	146.0	
...	
99297	U	U	U	U	U	Y	76.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	
99760	U	U	U	U	U	Y	107.0	

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
92	1000093
...	...
99297	1099298
99498	1099499
99509	1099510
99537	1099538
99760	1099761

[1621 rows x 100 columns]

Outliers in column 'avg3qty':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
84	93.020000	1348.25	75.00	0.0000	4.750000	1.852500	
85	97.590000	1804.00	75.00	1.4850	85.000000	8.500000	
101	114.132500	1649.75	83.00	1.7325	51.500000	14.647500	
...	
99509	156.712500	3140.75	159.99	2.7225	0.000000	0.000000	
99537	149.220000	2032.00	97.49	5.4450	234.500000	58.625000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99849	99.150000	927.50	70.00	5.9400	32.000000	8.000000	
99872	534.930000	4719.00	10.00	6.9300	2018.000000	515.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450000	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.000000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500000	0.0000	0.0000	-343.00	...	0.0	N	
101	1.875000	12.7725	0.0000	-176.75	...	0.0	U	
...	
99509	0.000000	0.0000	0.0000	-201.75	...	0.0	N	
99537	58.625000	0.0000	0.1600	442.00	...	0.0	U	
99760	163.166667	0.3900	0.0000	-1288.00	...	0.0	Z	
99849	8.000000	0.0000	15.2100	-55.50	...	0.0	N	
99872	485.750000	29.2500	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
101	U	U	U	U	U	Y	306.0	
...	

99509	U	U	U	U	U	Y	278.0
99537	U	U	U	U	U	Y	250.0
99760	U	U	U	U	U	Y	107.0
99849	U	U	U	U	U	Y	408.0
99872	U	U	U	U	U	Y	62.0

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
101	1000102
...	...
99509	1099510
99537	1099538
99760	1099761
99849	1099850
99872	1099873

[1608 rows x 100 columns]

Outliers in column 'avg3rev':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.99	0.0000	362.250000	72.450000	
48	107.235000	782.00	24.99	0.0000	232.750000	86.117500	
114	113.522500	1807.25	85.00	1.9800	102.000000	10.200000	
123	159.517500	2255.75	82.99	3.2175	666.500000	66.650000	
...	
99498	141.482500	1850.75	75.00	11.6325	195.000000	48.750000	
99509	156.712500	3140.75	159.99	2.7225	0.000000	0.000000	
99717	197.945000	1118.50	50.00	5.4450	475.000000	142.500000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99849	99.150000	927.50	70.00	5.9400	32.000000	8.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
14	99.800000	0.00	35.4975	-200.50	...	0.0	N	
20	72.450000	0.00	0.0000	-1007.00	...	0.0	Z	
48	86.117500	0.00	0.0000	-258.00	...	0.0	N	
114	10.200000	0.00	1.0025	-373.25	...	0.0	N	
123	66.650000	0.00	0.5850	-2238.75	...	0.0	H	
...	
99498	48.750000	0.00	0.0000	16.25	...	0.0	D	
99509	0.000000	0.00	0.0000	-201.75	...	0.0	N	
99717	142.500000	0.00	0.0000	30.50	...	0.0	N	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99849	8.000000	0.00	15.2100	-55.50	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
48	U	Y	Y	Y	Y	Y	162.0	
114	U	U	U	U	U	Y	387.0	
123	U	U	U	U	U	Y	318.0	
...	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99717	U	Y	Y	Y	U	Y	917.0	
99760	U	U	U	U	U	Y	107.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
14	1000015
20	1000021
48	1000049

```

114      1000115
123      1000124
...
99498    1099499
99509    1099510
99717    1099718
99760    1099761
99849    1099850

```

[1759 rows x 100 columns]

Outliers in column 'avg6mou':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.990000	2.2275	249.500000	99.800000	
20	172.4400	1978.00	99.990000	0.0000	362.250000	72.450000	
84	93.0200	1348.25	75.000000	0.0000	4.750000	1.852500	
85	97.5900	1804.00	75.000000	1.4850	85.000000	8.500000	
92	72.8100	1306.00	77.897500	0.0000	0.000000	0.000000	
...	
99286	136.7400	1681.00	64.723333	4.9500	192.666667	63.216667	
99297	237.7525	2495.25	154.990000	1.7325	36.000000	5.400000	
99498	141.4825	1850.75	75.000000	11.6325	195.000000	48.750000	
99509	156.7125	3140.75	159.990000	2.7225	0.000000	0.000000	
99537	149.2200	2032.00	97.490000	5.4450	234.500000	58.625000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800000	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450000	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.000000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500000	0.0000	0.0000	-343.00	...	0.0	N	
92	0.000000	0.0000	0.0000	-462.00	...	0.0	O	
...	
99286	63.216667	0.0000	3.6100	-616.00	...	0.0	N	
99297	5.400000	0.0000	0.0975	258.75	...	0.0	J	
99498	48.750000	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000000	0.0000	0.0000	-201.75	...	0.0	N	
99537	58.625000	0.0000	0.1600	442.00	...	0.0	U	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
92	U	U	U	U	U	Y	146.0	
...	
99286	U	U	U	U	U	Y	338.0	
99297	U	U	U	U	U	Y	76.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99537	U	U	U	U	U	Y	250.0	

	Customer_ID
14	1000015
20	1000021
84	1000085
85	1000086
92	1000093
...	...
99286	1099287
99297	1099298
99498	1099499
99509	1099510
99537	1099538

[1494 rows x 100 columns]

Outliers in column 'avg6qty':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.5150	1971.50	84.99	2.2275	249.50	99.8000	
20	172.4400	1978.00	99.99	0.0000	362.25	72.4500	
84	93.0200	1348.25	75.00	0.0000	4.75	1.8525	
85	97.5900	1804.00	75.00	1.4850	85.00	8.5000	
88	79.5950	828.00	75.00	0.0000	0.00	0.0000	
...	
99297	237.7525	2495.25	154.99	1.7325	36.00	5.4000	
99362	91.3400	1032.75	80.00	3.4650	31.50	7.8750	
99498	141.4825	1850.75	75.00	11.6325	195.00	48.7500	
99509	156.7125	3140.75	159.99	2.7225	0.00	0.0000	
99872	534.9300	4719.00	10.00	6.9300	2018.00	515.0000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
14	99.800	0.0000	35.4975	-200.50	...	0.0	N	
20	72.450	0.0000	0.0000	-1007.00	...	0.0	Z	
84	0.000	1.8525	1.9200	-165.25	...	0.0	S	
85	8.500	0.0000	0.0000	-343.00	...	0.0	N	
88	0.000	0.0000	2.1150	299.00	...	0.0	S	
...	
99297	5.400	0.0000	0.0975	258.75	...	0.0	J	
99362	7.875	0.0000	0.0000	-402.75	...	0.0	N	
99498	48.750	0.0000	0.0000	16.25	...	0.0	D	
99509	0.000	0.0000	0.0000	-201.75	...	0.0	N	
99872	485.750	29.2500	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
84	U	U	U	U	U	Y	10.0	
85	U	U	U	U	U	Y	175.0	
88	U	U	U	U	U	Y	350.0	
...	
99297	U	U	U	U	U	Y	76.0	
99362	U	U	U	U	U	Y	189.0	
99498	U	U	Y	Y	U	Y	736.0	
99509	U	U	U	U	U	Y	278.0	
99872	U	U	U	U	U	Y	62.0	

Customer_ID

14	1000015
20	1000021
84	1000085
85	1000086
88	1000089
...	...
99297	1099298
99362	1099363
99498	1099499
99509	1099510
99872	1099873

[1581 rows x 100 columns]

Outliers in column 'avg6rev':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
14	212.515000	1971.50	84.9900	2.2275	249.500000	99.800000	
20	172.440000	1978.00	99.9900	0.0000	362.250000	72.450000	
98	103.282500	1376.00	84.9900	0.7425	38.000000	15.200000	
114	113.522500	1807.25	85.0000	1.9800	102.000000	10.200000	
123	159.517500	2255.75	82.9900	3.2175	666.500000	66.650000	
...	
99674	84.355000	494.50	45.1500	8.9100	22.000000	8.800000	
99704	78.492500	434.25	71.2425	0.0000	59.000000	14.750000	

99717	197.945000	1118.50	50.0000	5.4450	475.000000	142.500000
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667
99849	99.150000	927.50	70.0000	5.9400	32.000000	8.000000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
14	99.800000	0.00	35.4975	-200.50	...	0.0	N	
20	72.450000	0.00	0.0000	-1007.00	...	0.0	Z	
98	15.200000	0.00	7.6625	355.00	...	0.0	N	
114	10.200000	0.00	1.0025	-373.25	...	0.0	N	
123	66.650000	0.00	0.5850	-2238.75	...	0.0	H	
...	
99674	8.800000	0.00	0.0000	482.50	...	0.0	U	
99704	14.750000	0.00	0.0000	-178.25	...	0.0	S	
99717	142.500000	0.00	0.0000	30.50	...	0.0	N	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99849	8.000000	0.00	15.2100	-55.50	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
14	U	U	Y	U	U	Y	199.0	
20	U	U	U	U	U	Y	143.0	
98	U	U	U	Y	Y	Y	652.0	
114	U	U	U	U	U	Y	387.0	
123	U	U	U	U	U	Y	318.0	
...	
99674	U	U	Y	U	Y	Y	5.0	
99704	U	U	U	Y	Y	Y	980.0	
99717	U	Y	Y	Y	U	Y	917.0	
99760	U	U	U	U	U	Y	107.0	
99849	U	U	U	U	U	Y	408.0	

	Customer_ID
14	1000015
20	1000021
98	1000099
114	1000115
123	1000124
...	...
99674	1099675
99704	1099705
99717	1099718
99760	1099761
99849	1099850

[1589 rows x 100 columns]

Outliers in column 'hnd_price':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
85	97.5900	1804.00	75.0000	1.4850	85.00	8.5000	
127	281.3300	3807.75	182.9375	8.4150	759.00	88.5000	
655	37.2650	329.00	31.3275	0.0000	10.00	3.0000	
975	191.7875	615.25	49.9900	0.0000	63.00	22.0500	
1958	104.6900	1096.50	82.4925	0.4950	127.25	31.8125	
...	
94046	66.7325	1330.75	9.1950	4.2075	0.00	0.0000	
96286	87.1625	420.00	89.9900	0.2475	0.00	0.0000	
96323	49.9900	777.50	69.9900	0.0000	0.00	0.0000	
97985	211.5575	2045.00	219.9900	0.9900	0.00	0.0000	
98612	153.7700	1441.50	109.9800	0.9900	239.00	47.8000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgrntvl	ethnic	\
85	8.5000	0.0000	0.0000	-343.00	...	0.0	N	
127	88.4250	0.0750	0.0000	5.25	...	0.0	N	
655	3.0000	0.0000	0.0000	463.00	...	0.0	H	
975	16.3625	5.6875	0.0000	53.75	...	1.0	H	
1958	31.8125	0.0000	0.0000	-85.50	...	0.0	N	

...
94046	0.0000	0.0000	3.0825	230.25	...	0.0	J
96286	0.0000	0.0000	2.4000	-54.00	...	1.0	N
96323	0.0000	0.0000	0.0000	60.50	...	0.0	U
97985	0.0000	0.0000	0.5775	-181.00	...	0.0	S
98612	47.8000	0.0000	0.0000	-992.50	...	0.0	H

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
85	U	U	U	U	U	Y	175.0	
127	U	U	U	U	Y	Y	77.0	
655	U	U	U	U	U	N	234.0	
975	U	U	Y	U	U	Y	32.0	
1958	U	U	U	U	Y	Y	164.0	
...	
94046	U	U	U	U	U	Y	214.0	
96286	Y	U	U	U	U	Y	217.0	
96323	U	U	U	U	U	Y	216.0	
97985	Y	U	U	U	U	Y	55.0	
98612	U	U	U	U	U	Y	169.0	

	Customer_ID
85	1000086
127	1000128
655	1000656
975	1000976
1958	1001959
...	...
94046	1094047
96286	1096287
96323	1096324
97985	1097986
98612	1098613

[94 rows x 100 columns]

Outliers in column 'phones':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
4	55.230000	570.50	71.9800	0.0000	0.000000	0.000000	
14	212.515000	1971.50	84.9900	2.2275	249.500000	99.800000	
18	55.270000	1212.75	49.9900	0.7425	0.000000	0.000000	
19	50.965000	162.00	69.9900	0.0000	2.500000	0.975000	
20	172.440000	1978.00	99.9900	0.0000	362.250000	72.450000	
...	
99621	35.700000	371.50	15.8875	1.7325	50.250000	15.075000	
99760	188.396667	1289.00	24.8400	0.0000	653.666667	163.556667	
99849	99.150000	927.50	70.0000	5.9400	32.000000	8.000000	
99872	534.930000	4719.00	10.0000	6.9300	2018.000000	515.000000	
99899	45.260000	149.00	44.4800	0.0000	2.000000	0.780000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
4	0.000000	0.000	0.0000	38.50	...	0.0	I	
14	99.800000	0.000	35.4975	-200.50	...	0.0	N	
18	0.000000	0.000	1.2850	169.25	...	0.0	N	
19	0.000000	0.975	0.0000	-58.00	...	0.0	S	
20	72.450000	0.000	0.0000	-1007.00	...	0.0	Z	
...	
99621	15.075000	0.000	0.0000	-371.50	...	0.0	I	
99760	163.166667	0.390	0.0000	-1288.00	...	0.0	Z	
99849	8.000000	0.000	15.2100	-55.50	...	0.0	N	
99872	485.750000	29.250	0.0000	0.00	...	0.0	N	
99899	0.000000	0.780	0.0000	-86.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
4	U	U	U	U	U	Y	434.0	
14	U	U	Y	U	U	Y	199.0	

18	U	U	U	U	U	Y	408.0
19	U	U	Y	Y	Y	N	253.0
20	U	U	U	U	U	Y	143.0
...
99621	U	U	U	U	U	Y	319.0
99760	U	U	U	U	U	Y	107.0
99849	U	U	U	U	U	Y	408.0
99872	U	U	U	U	U	Y	62.0
99899	U	U	U	U	Y	Y	75.0

Customer_ID	
4	1000005
14	1000015
18	1000019
19	1000020
20	1000021
...	...
99621	1099622
99760	1099761
99849	1099850
99872	1099873
99899	1099900

[2367 rows x 100 columns]

Outliers in column 'models':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
4	55.230000	570.50	71.98	0.0000	0.000000	0.000000	
14	212.515000	1971.50	84.99	2.2275	249.500000	99.800000	
18	55.270000	1212.75	49.99	0.7425	0.000000	0.000000	
48	107.235000	782.00	24.99	0.0000	232.750000	86.117500	
83	55.190000	1087.75	69.99	0.0000	13.000000	5.200000	
...
99343	72.825000	851.75	59.99	1.2375	57.000000	17.100000	
99362	91.340000	1032.75	80.00	3.4650	31.500000	7.875000	
99509	156.712500	3140.75	159.99	2.7225	0.000000	0.000000	
99760	188.396667	1289.00	24.84	0.0000	653.666667	163.556667	
99872	534.930000	4719.00	10.00	6.9300	2018.000000	515.000000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
4	0.000000	0.00	0.0000	38.50	...	0.0	I	
14	99.800000	0.00	35.4975	-200.50	...	0.0	N	
18	0.000000	0.00	1.2850	169.25	...	0.0	N	
48	86.117500	0.00	0.0000	-258.00	...	0.0	N	
83	5.200000	0.00	0.0000	109.25	...	1.0	U	
...
99343	17.100000	0.00	0.0000	25.25	...	0.0	H	
99362	7.875000	0.00	0.0000	-402.75	...	0.0	N	
99509	0.000000	0.00	0.0000	-201.75	...	0.0	N	
99760	163.166667	0.39	0.0000	-1288.00	...	0.0	Z	
99872	485.750000	29.25	0.0000	0.00	...	0.0	N	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
4	U	U	U	U	U	Y	434.0	
14	U	U	Y	U	U	Y	199.0	
18	U	U	U	U	U	Y	408.0	
48	U	Y	Y	Y	Y	Y	162.0	
83	U	U	U	U	U	Y	233.0	
...
99343	U	U	U	U	U	Y	4.0	
99362	U	U	U	U	U	Y	189.0	
99509	U	U	U	U	U	Y	278.0	
99760	U	U	U	U	U	Y	107.0	
99872	U	U	U	U	U	Y	62.0	

	Customer_ID
4	1000005
14	1000015
18	1000019
48	1000049
83	1000084
...	...
99343	1099344
99362	1099363
99509	1099510
99760	1099761
99872	1099873

[1085 rows x 100 columns]

Outliers in column 'rv':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	\
20	172.440000	1978.000000	99.99	0.0000	362.250000	
39	33.477500	195.500000	29.99	0.0000	0.250000	
40	82.162500	660.000000	50.00	0.0000	100.750000	
71	75.665000	241.750000	74.99	0.0000	0.000000	
84	93.020000	1348.250000	75.00	0.0000	4.750000	
...	
97133	88.472500	490.250000	49.99	1.4850	117.500000	
97425	10.990000	410.750000	10.00	0.9900	0.000000	
97427	14.800000	21.500000	10.00	0.0000	2.000000	
97498	40.732500	205.000000	49.99	0.7425	0.000000	
98916	79.296667	1427.333333	59.99	1.6500	62.333333	

	ovrrev_Mean	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	\
20	72.450000	72.450000	0.0000	0.000000	-1007.000000	...	
39	0.097500	0.000000	0.0975	2.565000	54.500000	...	
40	30.225000	30.225000	0.0000	1.937500	-184.000000	...	
71	0.000000	0.000000	0.0000	0.000000	-19.750000	...	
84	1.852500	0.000000	1.8525	1.920000	-165.250000	...	
...	
97133	46.997500	46.900000	0.0975	0.000000	276.750000	...	
97425	0.000000	0.000000	0.0000	0.000000	-152.750000	...	
97427	0.800000	0.800000	0.0000	0.000000	12.500000	...	
97498	0.000000	0.000000	0.0000	0.000000	-71.000000	...	
98916	24.933333	24.933333	0.0000	2.326667	6.666667	...	

	forgrntvl	ethnic	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	\
20	0.0	Z	U	U	U	U	U	
39	0.0	J	U	U	U	Y	U	
40	0.0	N	U	U	U	Y	U	
71	1.0	N	U	U	U	U	U	
84	0.0	S	U	U	U	U	U	
...	
97133	0.0	H	U	U	U	U	U	
97425	0.0	F	U	U	U	U	U	
97427	0.0	N	U	U	U	U	U	
97498	0.0	N	U	Y	Y	U	U	
98916	0.0	S	U	U	U	U	Y	

	creditcd	eqpdays	Customer_ID
20	Y	143.0	1000021
39	Y	179.0	1000040
40	Y	107.0	1000041
71	Y	226.0	1000072
84	Y	10.0	1000085
...
97133	Y	192.0	1097134
97425	Y	186.0	1097426
97427	Y	186.0	1097428

97498	Y	167.0	1097499
98916	Y	135.0	1098917

[4039 rows x 100 columns]

Outliers in column 'adults':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
47	78.2875	851.500000	85.00	0.0000	0.00	0.0000	
88	79.5950	828.000000	75.00	0.0000	0.00	0.0000	
126	75.0000	342.750000	75.00	0.0000	0.00	0.0000	
133	83.4950	256.500000	83.00	0.4950	0.00	0.0000	
173	63.4075	1181.000000	10.00	4.2075	120.50	48.2000	
...	
99567	30.0875	24.000000	29.99	0.0000	0.00	0.0000	
99588	65.5125	664.500000	35.00	1.2375	69.75	24.4125	
99772	33.2400	23.000000	29.99	0.0000	0.00	0.0000	
99776	52.3100	157.666667	50.00	2.3100	0.00	0.0000	
99875	105.5300	736.000000	44.99	2.6400	194.00	67.9000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
47	0.0000	0.0	0.0000	-205.500000	...	0.0	H	
88	0.0000	0.0	2.1150	299.000000	...	0.0	S	
126	0.0000	0.0	0.0000	-59.750000	...	0.0	H	
133	0.0000	0.0	0.0000	-256.500000	...	0.0	G	
173	48.2000	0.0	0.0000	156.000000	...	0.0	N	
...	
99567	0.0000	0.0	0.0975	-8.000000	...	0.0	R	
99588	24.4125	0.0	0.0000	-144.500000	...	0.0	N	
99772	0.0000	0.0	0.0000	0.000000	...	0.0	H	
99776	0.0000	0.0	0.0000	-5.666667	...	1.0	G	
99875	67.9000	0.0	0.0000	272.000000	...	0.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
47	U	U	U	U	U	Y	151.0	
88	U	U	U	U	U	Y	350.0	
126	U	U	U	U	Y	Y	581.0	
133	U	U	U	U	U	Y	709.0	
173	U	Y	U	U	U	Y	143.0	
...	
99567	U	U	U	Y	U	Y	569.0	
99588	U	U	Y	U	U	Y	518.0	
99772	U	U	U	U	Y	Y	845.0	
99776	U	Y	Y	U	U	Y	910.0	
99875	U	U	U	U	U	Y	958.0	

	Customer_ID
47	1000048
88	1000089
126	1000127
133	1000134
173	1000174
...	...
99567	1099568
99588	1099589
99772	1099773
99776	1099777
99875	1099876

[3005 rows x 100 columns]

Outliers in column 'income':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
19	50.9650	162.00	69.99	0.0000	2.50	0.9750	
119	18.2500	8.00	16.99	0.0000	4.25	1.1050	
189	105.7025	636.25	53.00	0.0000	54.00	5.4000	
407	5.0000	0.00	5.00	0.0000	0.00	0.0000	

582	93.9750	1218.00	114.99	1.4850	11.00	2.7500
...
98730	95.8500	1732.75	75.00	0.0000	78.75	19.6875
98736	102.2575	2181.25	89.99	3.2175	108.00	37.8000
98831	88.7850	324.00	30.00	0.2475	167.25	58.5375
99297	237.7525	2495.25	154.99	1.7325	36.00	5.4000
99674	84.3550	494.50	45.15	8.9100	22.00	8.8000

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic \
19	0.0000	0.975	0.0000	-58.00	...	0.0	S
119	1.1050	0.000	0.0000	-8.00	...	0.0	S
189	5.4000	0.000	1.0025	-397.25	...	0.0	H
407	0.0000	0.000	0.0000	0.00	...	0.0	N
582	2.7500	0.000	0.0000	-114.00	...	0.0	J
...
98730	19.6875	0.000	0.0000	20.25	...	0.0	H
98736	37.8000	0.000	0.0000	225.75	...	0.0	S
98831	58.5375	0.000	0.0000	736.00	...	0.0	H
99297	5.4000	0.000	0.0975	258.75	...	0.0	J
99674	8.8000	0.000	0.0000	482.50	...	0.0	U

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays \
19	U	U	Y	Y	Y	N	253.0
119	U	U	U	U	U	Y	206.0
189	U	U	Y	Y	U	Y	253.0
407	U	U	U	U	U	Y	511.0
582	U	U	U	U	Y	Y	372.0
...
98730	U	U	U	U	U	Y	327.0
98736	U	U	U	U	U	Y	96.0
98831	U	U	U	U	U	Y	519.0
99297	U	U	U	U	U	Y	76.0
99674	U	U	Y	U	Y	Y	5.0

	Customer_ID
19	1000020
119	1000120
189	1000190
407	1000408
582	1000583
...	...
98730	1098731
98736	1098737
98831	1098832
99297	1099298
99674	1099675

[996 rows x 100 columns]

Outliers in column 'forgntvl':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean \
9	31.6625	25.500000	29.99	0.2475	0.00	0.0
50	30.2600	23.750000	29.99	0.0000	0.00	0.0
71	75.6650	241.750000	74.99	0.0000	0.00	0.0
83	55.1900	1087.750000	69.99	0.0000	13.00	5.2
94	49.9900	820.500000	59.99	0.0000	1.50	0.0
...
99471	28.2200	60.000000	38.27	0.0000	0.00	0.0
99472	23.2600	102.000000	39.99	0.0000	0.00	0.0
99547	18.0900	21.000000	16.99	0.0000	2.75	1.1
99608	30.8300	102.000000	29.99	0.6600	0.00	0.0
99776	52.3100	157.666667	50.00	2.3100	0.00	0.0

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic \
9	0.0	0.0	0.000000	59.500000	...	1.0	N

50	0.0	0.0	0.000000	25.250000	...	1.0	I
71	0.0	0.0	0.000000	-19.750000	...	1.0	N
83	5.2	0.0	0.000000	109.250000	...	1.0	U
94	0.0	0.0	0.000000	26.500000	...	1.0	S
...
99471	0.0	0.0	3.446667	-30.000000	...	1.0	G
99472	0.0	0.0	0.470000	19.000000	...	1.0	G
99547	1.1	0.0	0.000000	4.000000	...	1.0	H
99608	0.0	0.0	0.000000	-54.000000	...	1.0	G
99776	0.0	0.0	0.000000	-5.666667	...	1.0	G

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
9	U	U	U	U	U	Y	601.0	
50	U	U	U	U	U	Y	985.0	
71	U	U	U	U	U	Y	226.0	
83	U	U	U	U	U	Y	233.0	
94	U	U	U	Y	Y	Y	451.0	
...	
99471	U	U	U	Y	U	Y	844.0	
99472	U	U	U	Y	U	Y	1013.0	
99547	U	U	U	U	U	Y	1004.0	
99608	U	U	U	U	U	Y	825.0	
99776	U	Y	Y	U	U	Y	910.0	

	Customer_ID
9	1000010
50	1000051
71	1000072
83	1000084
94	1000095
...	...
99471	1099472
99472	1099473
99547	1099548
99608	1099609
99776	1099777

[2463 rows x 100 columns]

Outliers in column 'eqpdays':

	rev_Mean	mou_Mean	totmrc_Mean	da_Mean	ovrmou_Mean	ovrrev_Mean	\
240	47.5000	255.50	50.00	0.0000	0.00	0.0000	
298	85.3150	194.50	75.00	2.2275	0.00	0.0000	
691	104.2850	1088.50	50.00	0.2475	475.25	47.5250	
1051	10.0975	19.25	10.00	0.0000	0.00	0.0000	
1054	86.4325	538.00	49.99	0.7425	119.00	35.7000	
...	
99278	40.9050	208.25	30.00	0.7425	21.00	7.3500	
99472	23.2600	102.00	39.99	0.0000	0.00	0.0000	
99492	35.7925	134.00	29.99	0.9900	13.75	4.8125	
99493	29.9900	102.00	29.99	0.0000	0.00	0.0000	
99547	18.0900	21.00	16.99	0.0000	2.75	1.1000	

	vceovr_Mean	datovr_Mean	roam_Mean	change_mou	...	forgntvl	ethnic	\
240	0.0000	0.0	0.0000	-182.50	...	1.0	N	
298	0.0000	0.0	0.0000	-51.50	...	0.0	N	
691	47.5250	0.0	0.0000	62.50	...	0.0	Z	
1051	0.0000	0.0	0.0975	-19.25	...	0.0	G	
1054	35.7000	0.0	0.0000	91.00	...	1.0	N	
...	
99278	7.3500	0.0	0.0000	-86.25	...	0.0	G	
99472	0.0000	0.0	0.4700	19.00	...	1.0	G	
99492	4.8125	0.0	0.0000	59.00	...	0.0	S	
99493	0.0000	0.0	0.0000	-2.00	...	0.0	H	
99547	1.1000	0.0	0.0000	4.00	...	1.0	H	

	kid0_2	kid3_5	kid6_10	kid11_15	kid16_17	creditcd	eqpdays	\
240	U	U	U	U	U	Y	1088.0	
298	U	U	U	U	U	Y	1120.0	
691	U	U	U	U	Y	Y	1118.0	
1051	U	U	Y	U	U	Y	1406.0	
1054	U	U	U	Y	Y	Y	1066.0	
...	
99278	U	U	U	U	U	Y	1041.0	
99472	U	U	U	Y	U	Y	1013.0	
99492	Y	Y	Y	U	U	Y	1010.0	
99493	U	U	U	U	U	Y	1010.0	
99547	U	U	U	U	U	Y	1004.0	

	Customer_ID
240	1000241
298	1000299
691	1000692
1051	1001052
1054	1001055
...	...
99278	1099279
99472	1099473
99492	1099493
99493	1099494
99547	1099548

[468 rows x 100 columns]

```
In [ ]: # Remove outliers from the DataFrame
for col in outlier_dict.keys():
    Q1 = df[col].quantile(0.25)
    Q3 = df[col].quantile(0.75)
    IQR = Q3 - Q1
    lower_bound = Q1 - 1.5 * IQR
    upper_bound = Q3 + 1.5 * IQR

    df = df[(df[col] >= lower_bound) & (df[col] <= upper_bound)]
```

```
In [ ]: from sklearn.preprocessing import StandardScaler

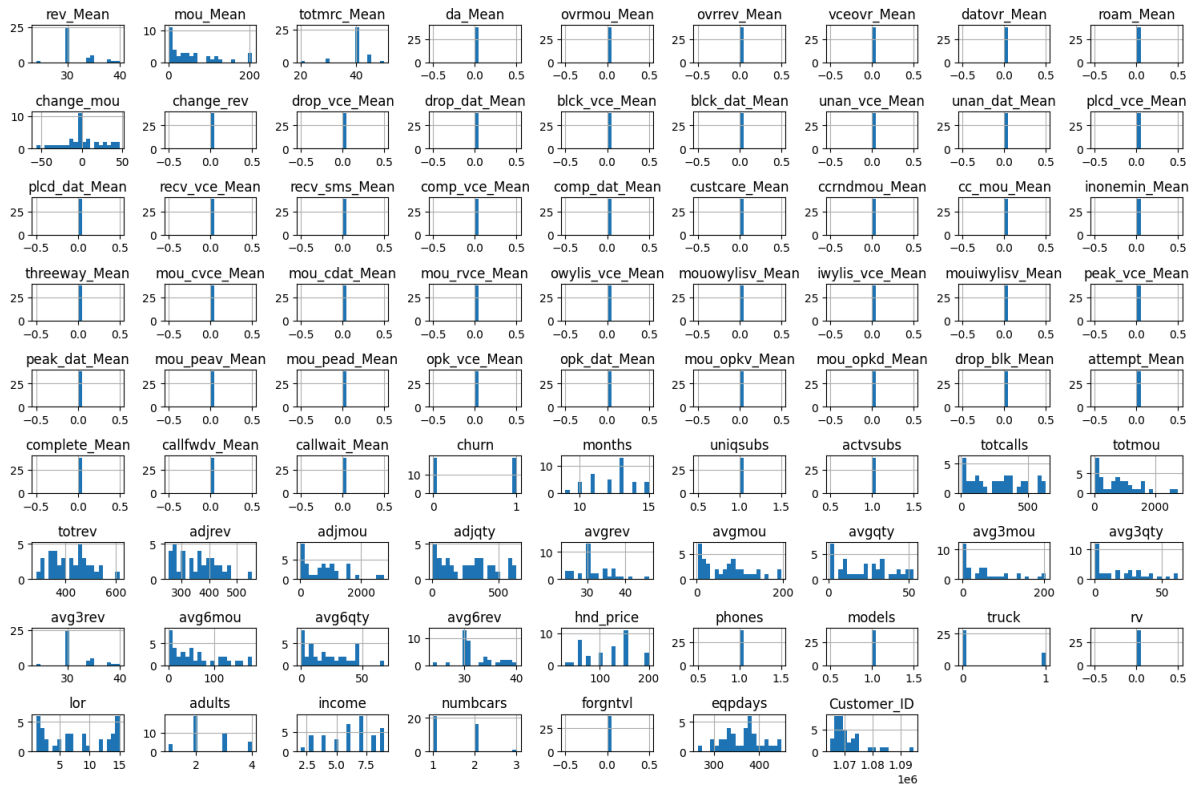
scaler = StandardScaler()
scaled_features = scaler.fit_transform(df[numeric_cols]) # Replace with your numeric columns
df_scaled = pd.DataFrame(scaled_features, columns=numeric_cols)
```

```
In [ ]: from sklearn.preprocessing import MinMaxScaler

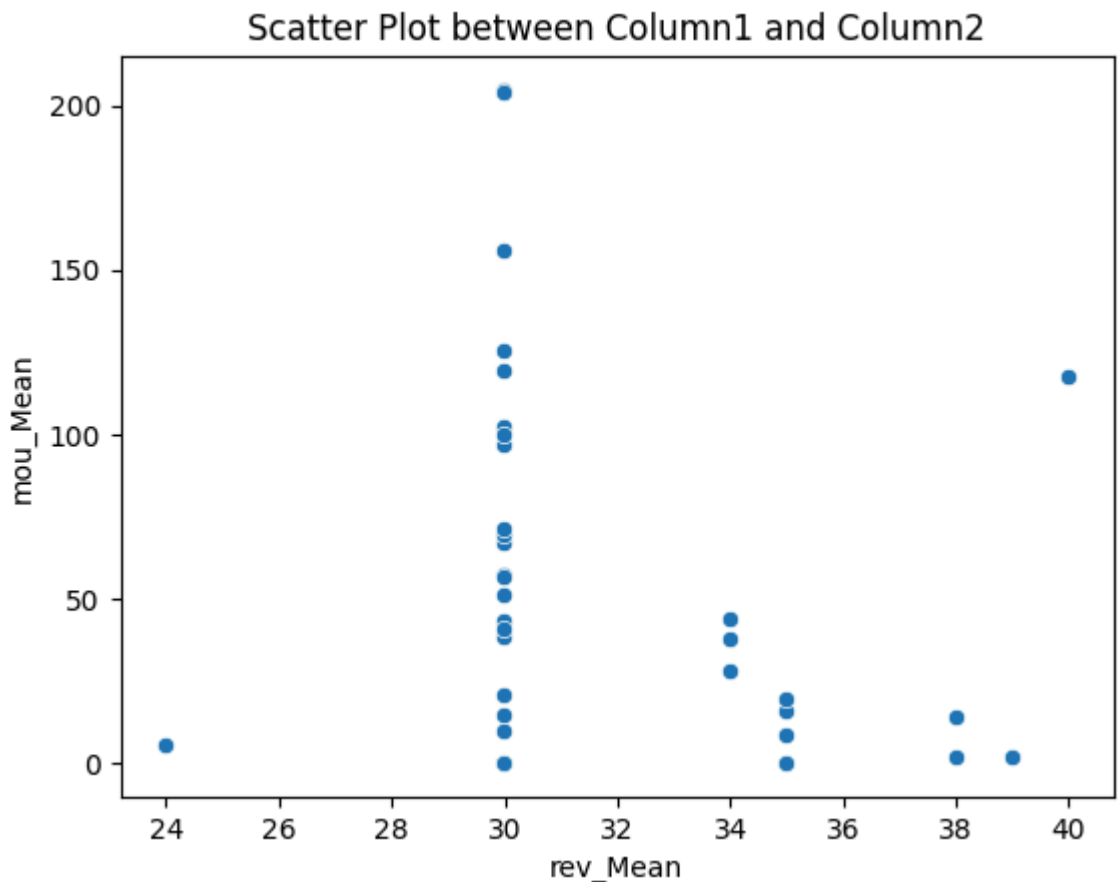
scaler = MinMaxScaler()
scaled_features = scaler.fit_transform(df[numeric_cols]) # Replace with your numeric columns
df_scaled = pd.DataFrame(scaled_features, columns=numeric_cols)
```

```
In [ ]: import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.decomposition import PCA
from scipy.stats import zscore
```

```
In [ ]: df.hist(bins=20, figsize=(15, 10))
plt.tight_layout()
plt.show()
```



```
In [ ]: sns.scatterplot(x='rev_Mean', y='mou_Mean', data=df)
plt.title('Scatter Plot between Column1 and Column2')
plt.show()
```



```
In [ ]: from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_absolute_error, mean_squared_error, r2_score
import matplotlib.pyplot as plt
```

```
In [ ]: X = df.drop('churn', axis=1) # This will drop the 'churn' column and keep all other columns
# Define y (target)
y = df['churn'] # The target column is 'churn'
```

```
In [ ]: X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)
```

```
In [ ]: # Convert categorical columns to numerical using one-hot encoding
df_encoded = pd.get_dummies(df, drop_first=True) # 'drop_first=True' avoids multicollinearity
```

```
In [ ]: # Define X (features) and y (target)
X = df_encoded.drop('churn', axis=1) # Drop the target column
y = df_encoded['churn'] # Define the target column

# Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)

# Train the model
model = LinearRegression()
model.fit(X_train, y_train)
```

```
Out[ ]: LinearRegression()
LinearRegression()
```

```
In [ ]: # Make predictions on the test set
y_pred = model.predict(X_test)
```

```
In [ ]: from sklearn.metrics import mean_absolute_error, mean_squared_error, r2_score
import numpy as np
```

```
# Calculate evaluation metrics
mae = mean_absolute_error(y_test, y_pred) # Mean Absolute Error
mse = mean_squared_error(y_test, y_pred) # Mean Squared Error
rmse = np.sqrt(mse) # Root Mean Squared Error
r2 = r2_score(y_test, y_pred) # R² Score

# Print the evaluation metrics
print(f'Mean Absolute Error: {mae}')
print(f'Mean Squared Error: {mse}')
print(f'Root Mean Squared Error: {rmse}')
print(f'R² Score: {r2}')
```

```
Mean Absolute Error: 0.6390251890785702
Mean Squared Error: 0.770122289955105
Root Mean Squared Error: 0.8775661171416687
R² Score: -2.168503135815289
```