```
Diabetes data with imputed missing values:
      ID  No_Pation Gender   AGE  Urea    Cr  HbA1c  Chol   TG  HDL  LDL  \
0  502.0    17975.0      F  50.0   4.7  46.0    4.9   4.2  0.9  2.4  1.4
1  735.0    34221.0      M  26.0   4.5  62.0    4.9   3.7  1.4  1.1  2.1
2  420.0    47975.0      F  50.0   4.7  46.0    4.9   4.2  0.9  2.4  1.4
3  680.0    87656.0      F  50.0   4.7  46.0    4.9   4.2  0.9  2.4  1.4
4  504.0    34223.0      M  33.0   7.1  46.0    4.9   4.9  1.0  0.8  2.0

   VLDL   BMI CLASS
0   0.5  24.0     N
1   0.6  23.0     N
2   0.5  24.0     N
3   0.5  24.0     N
4   0.4  21.0     N

Adult income data with imputed values and encoding:
   age_18  age_19  age_20  age_21  age_22  age_23  age_24  age_25  age_26  \
0   False   False   False   False   False   False   False    True   False
1   False   False   False   False   False   False   False   False   False
2   False   False   False   False   False   False   False   False   False
3   False   False   False   False   False   False   False   False   False
4    True   False   False   False   False   False   False   False   False

   age_27  ...  native-country_Puerto-Rico  native-country_Scotland  \
0   False  ...                       False                    False
1   False  ...                       False                    False
2   False  ...                       False                    False
3   False  ...                       False                    False
4   False  ...                       False                    False

   native-country_South  native-country_Taiwan  native-country_Thailand  \
0                 False                  False                    False
1                 False                  False                    False
2                 False                  False                    False
3                 False                  False                    False
4                 False                  False                    False

   native-country_Trinadad&Tobago  native-country_United-States  \
0                           False                          True
1                           False                          True
2                           False                          True
3                           False                          True
4                           False                          True

   native-country_Vietnam  native-country_Yugoslavia  income_>50K
0                   False                      False        False
1                   False                      False        False
2                   False                      False         True
3                   False                      False         True
4                   False                      False        False
```

```
No numeric columns found for scaling in adult income dataset.
Diabetes data with Min-Max scaling:
         ID  No_Pation Gender       AGE      Urea        Cr    HbA1c  \
0  0.627034   0.000237      F  0.508475  0.109375  0.050378  0.264901
1  0.918648   0.000452      M  0.101695  0.104167  0.070529  0.264901
2  0.524406   0.000634      F  0.508475  0.109375  0.050378  0.264901
3  0.849812   0.001160      F  0.508475  0.109375  0.050378  0.264901
4  0.629537   0.000452      M  0.220339  0.171875  0.050378  0.264901


       Chol        TG       HDL       LDL      VLDL       BMI CLASS
0  0.407767  0.044444  0.226804  0.114583  0.011461  0.173913     N
1  0.359223  0.081481  0.092784  0.187500  0.014327  0.139130     N
2  0.407767  0.044444  0.226804  0.114583  0.011461  0.173913     N
3  0.407767  0.044444  0.226804  0.114583  0.011461  0.173913     N
4  0.475728  0.051852  0.061856  0.177083  0.008596  0.069565     N

Diabetes data with Standard scaling:
         ID  No_Pation Gender       AGE      Urea        Cr    HbA1c  \
0  0.672140  -0.074747      F -0.401144 -0.144781 -0.382672 -1.334983
1  1.641852  -0.069940      M -3.130017 -0.212954 -0.115804 -1.334983
2  0.330868  -0.065869      F -0.401144 -0.144781 -0.382672 -1.334983
3  1.412950  -0.054126      F -0.401144 -0.144781 -0.382672 -1.334983
4  0.680463  -0.069939      M -2.334096  0.673299 -0.382672 -1.334983


       Chol        TG       HDL       LDL      VLDL       BMI CLASS
0 -0.509436 -1.035084  1.810756 -1.085457 -0.369958 -1.124622     N
1 -0.893730 -0.678063 -0.158692 -0.457398 -0.342649 -1.326239     N
2 -0.509436 -1.035084  1.810756 -1.085457 -0.369958 -1.124622     N
3 -0.509436 -1.035084  1.810756 -1.085457 -0.369958 -1.124622     N
4  0.028576 -0.963680 -0.613180 -0.547121 -0.397267 -1.729472     N

Adult income data with Min-Max scaling:
   age_18  age_19  age_20  age_21  age_22  age_23  age_24  age_25  age_26  \
0   False   False   False   False   False   False   False    True   False
1   False   False   False   False   False   False   False   False   False
2   False   False   False   False   False   False   False   False   False
3   False   False   False   False   False   False   False   False   False
4    True   False   False   False   False   False   False   False   False

   age_27  ...  native-country_Puerto-Rico  native-country_Scotland  \
0   False  ...                       False                    False
1   False  ...                       False                    False
2   False  ...                       False                    False
3   False  ...                       False                    False
4   False  ...                       False                    False

   native-country_South  native-country_Taiwan  native-country_Thailand  \
0                 False                  False                    False
1                 False                  False                    False
2                 False                  False                    False
3                 False                  False                    False
4                 False                  False                    False

   native-country_Trinadad&Tobago  native-country_United-States  \
0                           False                          True
1                           False                          True
2                           False                          True
3                           False                          True
```

```
Information of all columns:
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 5000 entries, 0 to 4999
Data columns (total 7 columns):
 #   Column                        Non-Null Count  Dtype
---  ------                        --------------  -----
 0   Avg. Area Income              5000 non-null   float64
 1   Avg. Area House Age           5000 non-null   float64
 2   Avg. Area Number of Rooms     5000 non-null   float64
 3   Avg. Area Number of Bedrooms  5000 non-null   float64
 4   Area Population               5000 non-null   float64
 5   Price                         5000 non-null   float64
 6   Address                       5000 non-null   object
dtypes: float64(6), object(1)
memory usage: 273.6+ KB
None

Statistical information of numerical columns:
       Avg. Area Income  Avg. Area House Age  Avg. Area Number of Rooms  \
count       5000.000000          5000.000000                5000.000000
mean       68583.108984             5.977222                   6.987792
std        10657.991214             0.991456                   1.005833
min        17796.631190             2.644304                   3.236194
25%        61480.562390             5.322283                   6.299250
50%        68804.286405             5.970429                   7.002902
75%        75783.338665             6.650808                   7.665871
max       107701.748400             9.519088                  10.759588

       Avg. Area Number of Bedrooms  Area Population         Price
count                   5000.000000     5000.000000  5.000000e+03
mean                       3.981330    36163.516039  1.232073e+06
std                        1.234137     9925.650114  3.531176e+05
min                        2.000000      172.610686  1.593866e+04
25%                        3.140000    29403.928700  9.975771e+05
50%                        4.050000    36199.406690  1.232669e+06
75%                        4.490000    42861.290770  1.471210e+06
max                        6.500000    69621.713380  2.469066e+06

Count of unique labels for 'Ocean Proximity' column:
Column 'ocean_proximity' not found in the DataFrame. Available columns: ['Avg. Area Income', 'Avg. Area House Age', 'Avg. Area Number of Rooms', 'Avg. Area

Columns with missing values:
Series([], dtype: int64)
```