

EDA and Similarity of Transactions on CreditCardFraudDetection

February 11, 2018

0.1 Kaggle Data Set - Credit Card Fraud

0.1.1 The datasets contains transactions made by credit cards in September 2013 by european cardholders.

0.2 Dataset Information:

- * Number of Instances: 284,807
- * Number of Attributes: 31 (including the class attribute)
- * Attribute Information:
- * Features V1, V2, ... V28 are the principal components obtained with PCA.
- * The only features which have not been transformed with PCA are 'Time' and 'Amount'.
- * Feature 'Time' contains the seconds elapsed between each transaction and the first transaction in the dataset.

0.2.1 Class (class attribute):

- * Feature 'Class' is the response variable and it takes value 1 in case of fraud and 0 otherwise.
 - 1 = Fraud Transaction
 - 0 = Normal Transaction

0.2.2 All the remaining details regarding the data set can be found in the below link.

0.2.3 CreditCardFraud

```
In [3]: import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import numpy as np
from sklearn.metrics.pairwise import cosine_similarity

%matplotlib inline

In [4]: #download the data set from
#https://www.kaggle.com/dalpozz/creditcardfraud/data
# load the data set
data=pd.read_csv("creditcard.csv")
```

```
In [5]: data.shape
```

```
Out[5]: (284807, 31)
```

```
In [6]: data.head()
```

```
Out[6]:
```

	Time	V1	V2	V3	V4	V5	V6	V7	\
0	0.0	-1.359807	-0.072781	2.536347	1.378155	-0.338321	0.462388	0.239599	
1	0.0	1.191857	0.266151	0.166480	0.448154	0.060018	-0.082361	-0.078803	
2	1.0	-1.358354	-1.340163	1.773209	0.379780	-0.503198	1.800499	0.791461	
3	1.0	-0.966272	-0.185226	1.792993	-0.863291	-0.010309	1.247203	0.237609	
4	2.0	-1.158233	0.877737	1.548718	0.403034	-0.407193	0.095921	0.592941	

	V8	V9	...	V21	V22	V23	V24	\
0	0.098698	0.363787	...	-0.018307	0.277838	-0.110474	0.066928	
1	0.085102	-0.255425	...	-0.225775	-0.638672	0.101288	-0.339846	
2	0.247676	-1.514654	...	0.247998	0.771679	0.909412	-0.689281	
3	0.377436	-1.387024	...	-0.108300	0.005274	-0.190321	-1.175575	
4	-0.270533	0.817739	...	-0.009431	0.798278	-0.137458	0.141267	

	V25	V26	V27	V28	Amount	Class
0	0.128539	-0.189115	0.133558	-0.021053	149.62	0
1	0.167170	0.125895	-0.008983	0.014724	2.69	0
2	-0.327642	-0.139097	-0.055353	-0.059752	378.66	0
3	0.647376	-0.221929	0.062723	0.061458	123.50	0
4	-0.206010	0.502292	0.219422	0.215153	69.99	0

[5 rows x 31 columns]

```
In [7]: #how many transactions are fraud
data["Class"].value_counts()
```

```
Out[7]: 0    284315
        1      492
        Name: Class, dtype: int64
```

Class label:

- label 0 - **Normal transactions** count is **284315**.
- label 1 - **Fraud transactions** count is **492**.

Clearly it is an **imbalanced dataset**.

```
In [8]: # statistics
data.describe()
```

```
Out[8]:
```

	Time	V1	V2	V3	V4	\
count	284807.000000	2.848070e+05	2.848070e+05	2.848070e+05	2.848070e+05	
mean	94813.859575	3.919560e-15	5.688174e-16	-8.769071e-15	2.782312e-15	

std	47488.145955	1.958696e+00	1.651309e+00	1.516255e+00	1.415869e+00
min	0.000000	-5.640751e+01	-7.271573e+01	-4.832559e+01	-5.683171e+00
25%	54201.500000	-9.203734e-01	-5.985499e-01	-8.903648e-01	-8.486401e-01
50%	84692.000000	1.810880e-02	6.548556e-02	1.798463e-01	-1.984653e-02
75%	139320.500000	1.315642e+00	8.037239e-01	1.027196e+00	7.433413e-01
max	172792.000000	2.454930e+00	2.205773e+01	9.382558e+00	1.687534e+01

	V5	V6	V7	V8	V9 \
count	2.848070e+05	2.848070e+05	2.848070e+05	2.848070e+05	2.848070e+05
mean	-1.552563e-15	2.010663e-15	-1.694249e-15	-1.927028e-16	-3.137024e-15
std	1.380247e+00	1.332271e+00	1.237094e+00	1.194353e+00	1.098632e+00
min	-1.137433e+02	-2.616051e+01	-4.355724e+01	-7.321672e+01	-1.343407e+01
25%	-6.915971e-01	-7.682956e-01	-5.540759e-01	-2.086297e-01	-6.430976e-01
50%	-5.433583e-02	-2.741871e-01	4.010308e-02	2.235804e-02	-5.142873e-02
75%	6.119264e-01	3.985649e-01	5.704361e-01	3.273459e-01	5.971390e-01
max	3.480167e+01	7.330163e+01	1.205895e+02	2.000721e+01	1.559499e+01

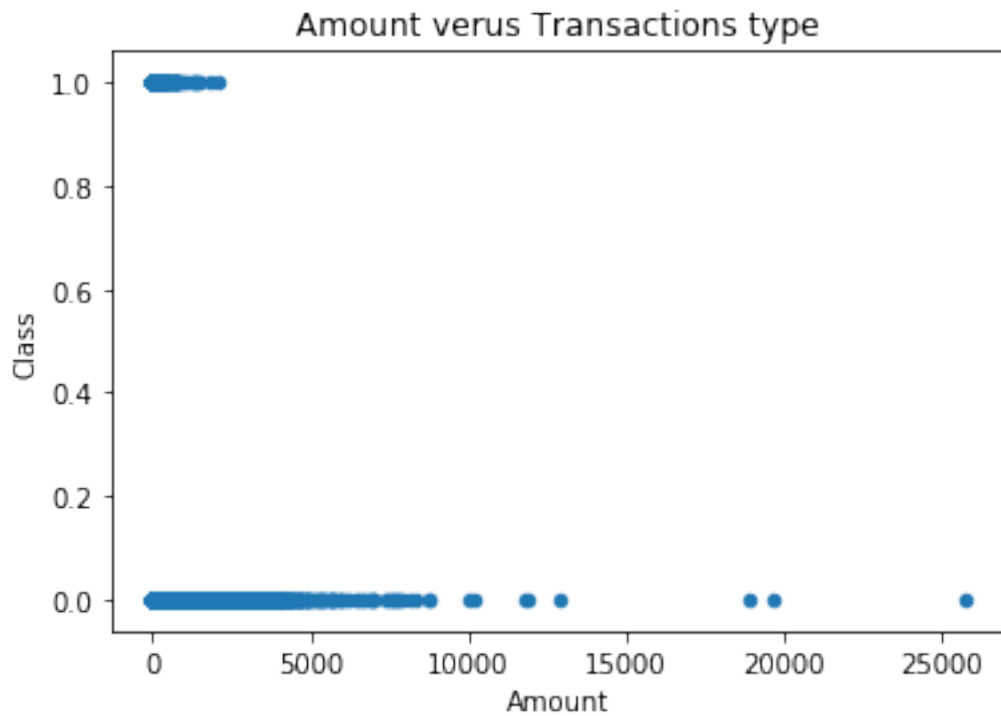
	...	V21	V22	V23	V24 \
count	...	2.848070e+05	2.848070e+05	2.848070e+05	2.848070e+05
mean	...	1.537294e-16	7.959909e-16	5.367590e-16	4.458112e-15
std	...	7.345240e-01	7.257016e-01	6.244603e-01	6.056471e-01
min	...	-3.483038e+01	-1.093314e+01	-4.480774e+01	-2.836627e+00
25%	...	-2.283949e-01	-5.423504e-01	-1.618463e-01	-3.545861e-01
50%	...	-2.945017e-02	6.781943e-03	-1.119293e-02	4.097606e-02
75%	...	1.863772e-01	5.285536e-01	1.476421e-01	4.395266e-01
max	...	2.720284e+01	1.050309e+01	2.252841e+01	4.584549e+00

	V25	V26	V27	V28	Amount \
count	2.848070e+05	2.848070e+05	2.848070e+05	2.848070e+05	284807.000000
mean	1.453003e-15	1.699104e-15	-3.660161e-16	-1.206049e-16	88.349619
std	5.212781e-01	4.822270e-01	4.036325e-01	3.300833e-01	250.120109
min	-1.029540e+01	-2.604551e+00	-2.256568e+01	-1.543008e+01	0.000000
25%	-3.171451e-01	-3.269839e-01	-7.083953e-02	-5.295979e-02	5.600000
50%	1.659350e-02	-5.213911e-02	1.342146e-03	1.124383e-02	22.000000
75%	3.507156e-01	2.409522e-01	9.104512e-02	7.827995e-02	77.165000
max	7.519589e+00	3.517346e+00	3.161220e+01	3.384781e+01	25691.160000

	Class
count	284807.000000
mean	0.001727
std	0.041527
min	0.000000
25%	0.000000
50%	0.000000
75%	0.000000
max	1.000000

[8 rows x 31 columns]

```
In [9]: # lets plot plain scatter plot considering Amount and Class
data.plot(kind='scatter', x='Amount', y='Class', title = 'Amount verus Transactions type')
plt.show()
```

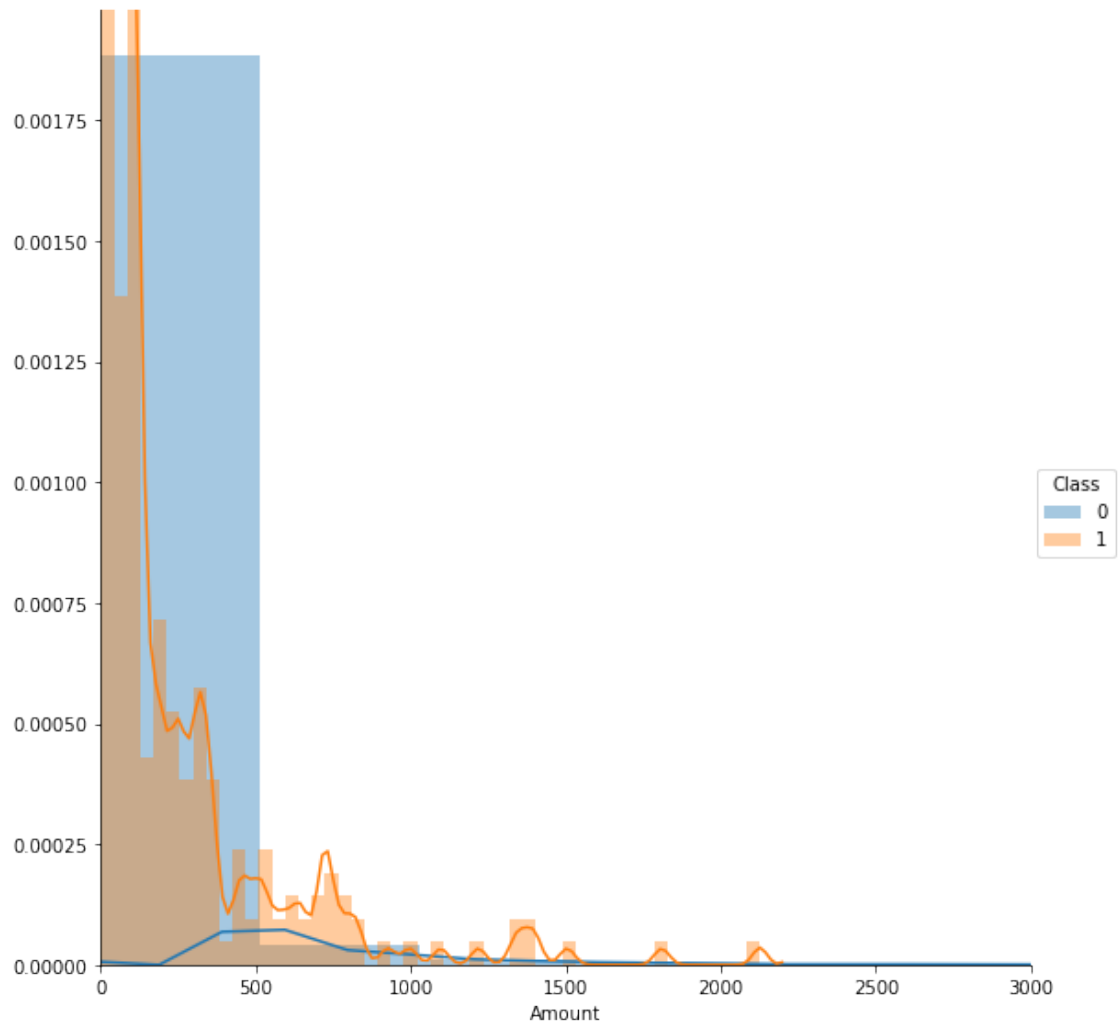


0.2.4 Observation:

- 1) We can see from the above Scatter plot that **most of the transaction amounts are between 0 to 2500 for both normal and fraud.**

Let us check fraud Amount versus normal Amount distrubutions

```
In [10]: g=sns.FacetGrid(data, hue='Class', size=8)
plot=g.map(sns.distplot,"Amount").add_legend()
g = g.set(xlim=(0,3000))
```

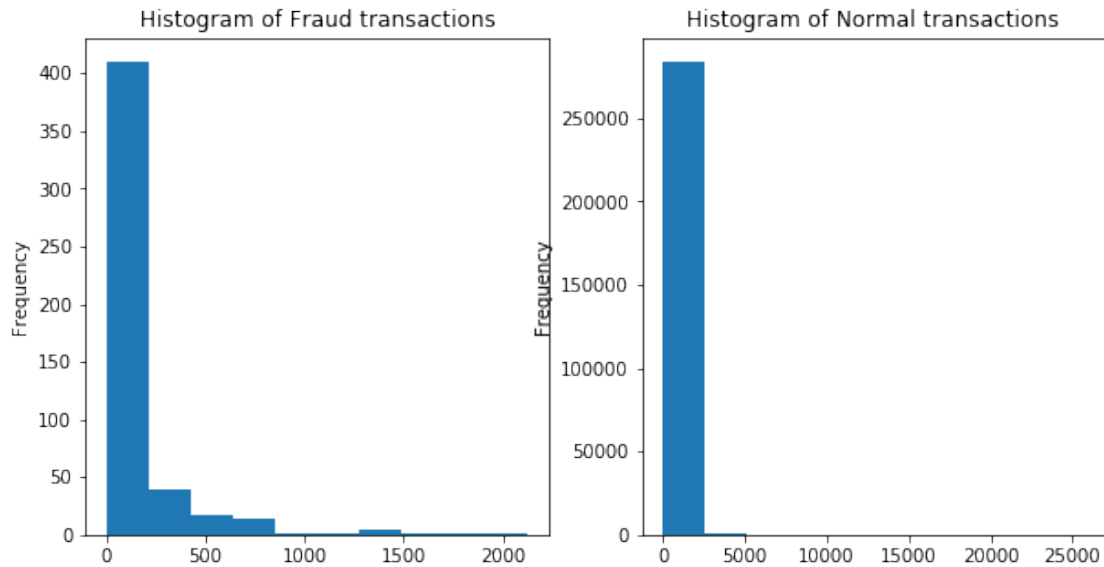


```
In [11]: #Divide the dataset according to the label FraudTransactions and Normal Transactions
# Fraud means Class=1 and Normal means status =0
```

```
fraud=data.loc[data["Class"]==1]
normal=data.loc[data["Class"]==0]
```

```
In [12]: plt.figure(figsize=(10,5))
plt.subplot(121)
fraud.Amount.plot.hist(title="Histogram of Fraud transactions")
plt.subplot(122)
normal.Amount.plot.hist(title="Histogram of Normal transactions")
```

```
Out[12]: <matplotlib.axes._subplots.AxesSubplot at 0x10a2f9eb8>
```



```
In [13]: print("Summary Statistics of fraud transactions:")
         fraud.describe().Amount
```

Summary Statistics of fraud transactions:

```
Out[13]: count      492.000000
         mean       122.211321
         std       256.683288
         min         0.000000
         25%         1.000000
         50%         9.250000
         75%        105.890000
         max       2125.870000
         Name: Amount, dtype: float64
```

```
In [14]: print("Summary Statistics of Normal transactions:")
         normal.describe().Amount
```

Summary Statistics of Normal transactions:

```
Out[14]: count    284315.000000
         mean       88.291022
         std       250.105092
         min         0.000000
         25%         5.650000
         50%        22.000000
         75%        77.050000
         max     25691.160000
         Name: Amount, dtype: float64
```

0.2.5 Observation:

From the above plots and Statistics we can see that **fraud transactions amount on average is higher than normal transactions amount though absolute amount for normal transactions is high**. Based on this we cannot simply come up with a condition on amount to detect a fraud transaction.

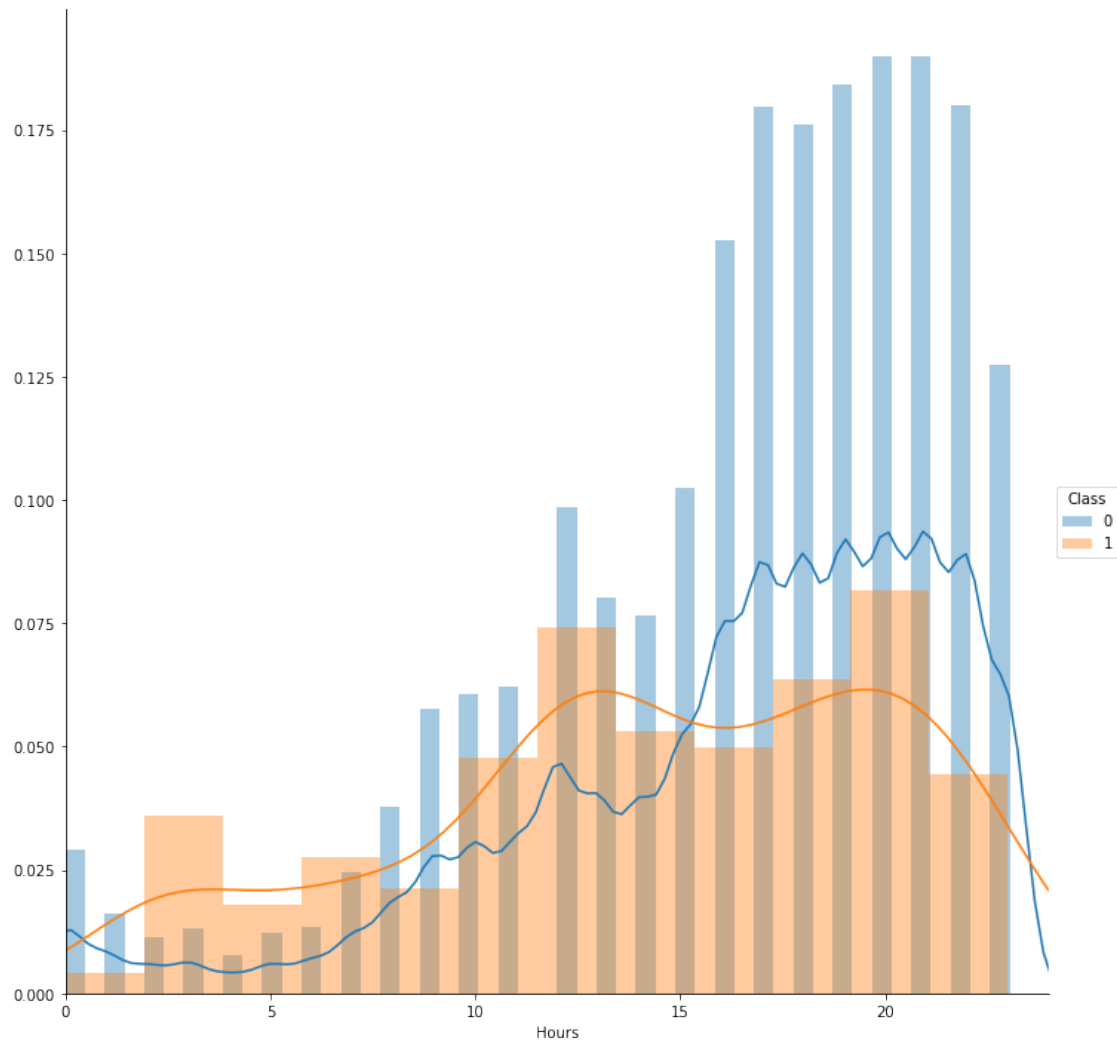
0.2.6 Let us Analyze fraud and normal transactions with respect to time - Though each transaction is different just out of curiosity, am checking fraud transactions occurrence with respect to time on two days

```
In [15]: # DataSet contains two days transactions.
# Feature 'Time' contains the seconds elapsed between each transaction and the first
# transaction in the dataset.let us convert time in seconds to hours of a day
dataSubset = data[['Time', 'Amount', 'Class']].copy()

In [16]: # Get rid of $ and , in the SAL-RATE, then convert it to a float
def seconds_Hour_Coversion(seconds):
    hours = seconds/(60*60) ## for conversion of seconds to hours.
    if hours>24:
        ## if it is more than 24 hours then divide it by 2 as max number of hours is 48.
        hours= hours/2
        return int(hours)
    else:
        return int(hours)

In [17]: # Save the result in a new column
dataSubset['Hours'] = dataSubset['Time'].apply(seconds_Hour_Coversion)

In [18]: g=sns.FacetGrid(dataSubset, hue='Class', size=10)
plot=g.map(sns.distplot,"Hours").add_legend()
g = g.set(xlim=(0,24))
```



```
In [19]: #Divide the data set according to the label FraudTransactions and Normal Transactions
# Fraud means Class=1 and Normal means status =0
frauddata=dataSubset.loc[data["Class"]==1]
normaldata=dataSubset.loc[data["Class"]==0]
```

```
In [20]: frauddata.describe()
```

```
Out [20]:
```

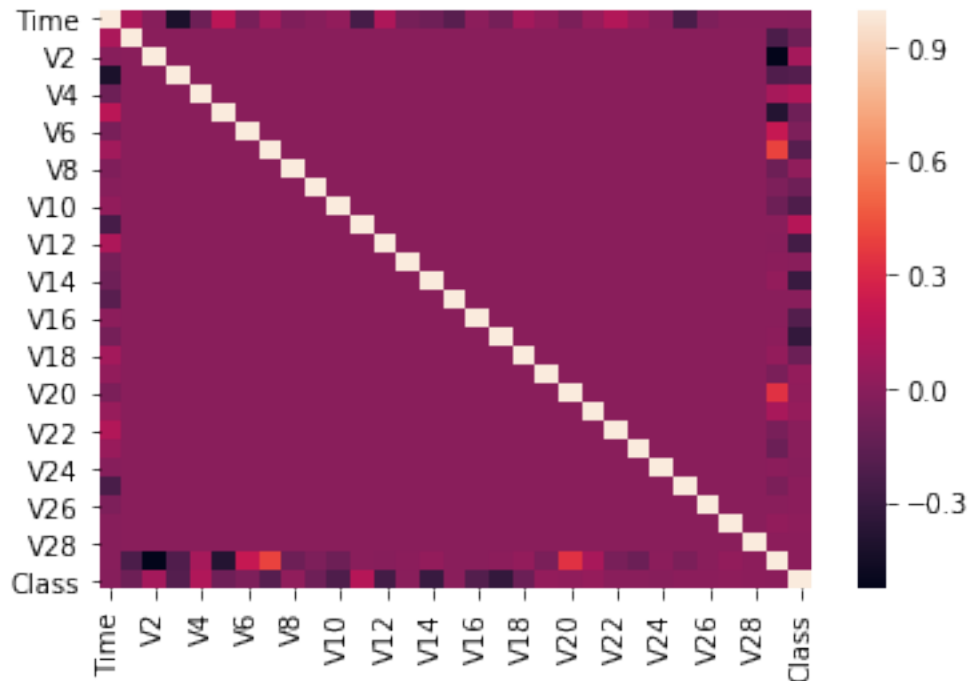
	Time	Amount	Class	Hours
count	492.000000	492.000000	492.0	492.000000
mean	80746.806911	122.211321	1.0	14.313008
std	47835.365138	256.683288	0.0	5.928253
min	406.000000	0.000000	1.0	0.000000
25%	41241.500000	1.000000	1.0	11.000000
50%	75568.500000	9.250000	1.0	14.500000
75%	128483.000000	105.890000	1.0	19.000000
max	170348.000000	2125.870000	1.0	23.000000

0.2.7 Observation:

- 1) During the **early hours** i.e at (2 to 3 AM) there are **more fraud transactions when compared with normal transactions** - may be more chance of occurring during that time.

```
In [21]: #let us plot a heat map for correlation of the features
sns.heatmap(data.corr())
```

```
Out[21]: <matplotlib.axes._subplots.AxesSubplot at 0x1133206a0>
```



0.2.8 Observation:

- 1) All most all the features are **uncorrelated**.

0.3 Cosine Similarity of Transactions:

1) Extract 100 Samples from the dataSet.

2) For every transaction in the sample top 10 transactions in the dataset which have the lowest similarity(i,j).

```
In [22]: data.index.name='TransactionId'
        ## let us take 100 samples from the dataset using train_test_split without missing
        # class distrubution in the original dataset.
        from sklearn.model_selection import train_test_split
```

```
X_train,X_test,y_train,y_test = train_test_split(data.loc[:, data.columns != 'Class'],
                                                data['Class'], test_size=0.00035, random_state=42)
sample = pd.concat([X_test, y_test], axis=1)
sample.shape
```

Out[22]: (100, 31)

```
In [23]: # Computing the Similarity
similarity=cosine_similarity(sample,data)
similarity
```

```
Out[23]: array([[ 8.76963363e-03,  6.14303111e-03,  1.14126542e-02, ...,
                  9.99964177e-01,  9.99961318e-01,  9.99971038e-01],
                [ 1.17462490e-02,  8.32789565e-03,  1.43896665e-02, ...,
                  9.99935494e-01,  9.99931633e-01,  9.99944923e-01],
                [ 8.72486637e-04,  6.48262596e-04,  3.51361102e-03, ...,
                  9.99999879e-01,  9.99999661e-01,  9.9999921e-01],
                ...,
                [ 3.47615604e-04,  2.48996705e-04,  2.98851016e-03, ...,
                  9.99999998e-01,  9.99999956e-01,  9.99999587e-01],
                [ 7.01971362e-05,  4.64298301e-05,  2.71075987e-03, ...,
                  9.99999947e-01,  9.99999999e-01,  9.99999297e-01],
                [ 1.01496706e-04,  5.80906821e-05,  2.74214708e-03, ...,
                  9.99999954e-01,  9.99999996e-01,  9.99999331e-01]])
```

```
In [24]: # rename the index and name it as TransactionId
sample.head()
```

```
Out[24]:
```

	Time	V1	V2	V3	V4	V5	\
TransactionId							
43428	41505.0	-16.526507	8.584972	-18.649853	9.505594	-13.793819	
49906	44261.0	0.339812	-2.743745	-0.134070	-1.385729	-1.451413	
29474	35484.0	1.399590	-0.590701	0.168619	-1.029950	-0.539806	
276481	167123.0	-0.432071	1.647895	-1.669361	-0.349504	0.785785	
278846	168473.0	2.014160	-0.137394	-1.015839	0.327269	-0.182179	

	V6	V7	V8	V9	...	V21	\
TransactionId					...		
43428	-2.832404	-16.701694	7.517344	-8.507059	...	1.190739	
49906	1.015887	-0.524379	0.224060	0.899746	...	-0.213436	
29474	0.040444	-0.712567	0.002299	-0.971747	...	0.102398	
276481	-0.630647	0.276990	0.586025	-0.484715	...	0.358932	
278846	-0.956571	0.043241	-0.160746	0.363241	...	-0.238644	

	V22	V23	V24	V25	V26	V27	\
TransactionId							
43428	-1.127670	-2.358579	0.673461	-1.413700	-0.462762	-2.018575	
49906	-0.942525	-0.526819	-1.156992	0.311211	-0.746647	0.040996	
29474	0.168269	-0.166639	-0.810250	0.505083	-0.232340	0.011409	

276481	0.873663	-0.178642	-0.017171	-0.207392	-0.157756	-0.237386
278846	-0.616400	0.347045	0.061561	-0.360196	0.174730	-0.078043

	V28	Amount	Class
TransactionId			
43428	-1.042804	364.19	1
49906	0.102038	520.12	0
29474	0.004634	31.00	0
276481	0.001934	1.50	0
278846	-0.070571	0.89	0

[5 rows x 31 columns]

```
In [58]: def printResult(transaction1,first10pairs,data,dict):
        x=transaction1[1][30]
        y=transaction1[0]
        s1='For the transaction id = '+ '{:d}'.format(y) + ', and Class = ' + \
            '{0:.5g}'.format(x)
        print (s1 +"\n")
        print ('Similar transactions are :'+ '\n')
        for k in first10pairs:
            printSimilarity(k,dict[k],data)
        print ('-----'+"\n")

        def printSimilarity(key,similarity,data):
            x=key[1]
            s=similarity
            y=key[0]
            print ("Class = " + '{0:.5g}'.format(x) + ", Similarity = "+\
                '{:f}'.format(s)+ ", transactionId = '"+'{:d}'.format(y)+"\n")
```

```
In [59]: import operator
import itertools
i=-1;
dict={}
for transaction1 in sample.iterrows() :
    i=i+1
    j=0
    for transaction2 in data.iterrows():
        if i is not j:
            #Storing key-transactionid and class as tuple
            # value as similarity in dictionary
            dict[(transaction2[0],transaction2[1][30])] = similarity[i][j]
        j=j+1

    if dict :
        sorted_dict = sorted(dict, key=dict.__getitem__)[:10]
```

```
printResult(transaction1,sorted_dict,data,dict)
dict.clear()
```

For the transaction id = 43428, and Class = 1

Similar transactions are :

```
Class = 0, Similarity = 0.006143, transactionId = 1
Class = 0, Similarity = 0.011413, transactionId = 2
Class = 0, Similarity = 0.016857, transactionId = 3
Class = 0, Similarity = 0.034422, transactionId = 51
Class = 0, Similarity = 0.035667, transactionId = 164
Class = 0, Similarity = 0.037282, transactionId = 4
Class = 0, Similarity = 0.060354, transactionId = 89
Class = 0, Similarity = 0.077623, transactionId = 20
Class = 0, Similarity = 0.083516, transactionId = 8
Class = 0, Similarity = 0.090706, transactionId = 12
```

For the transaction id = 49906, and Class = 0

Similar transactions are :

```
Class = 0, Similarity = 0.011746, transactionId = 0
Class = 0, Similarity = 0.014390, transactionId = 2
Class = 0, Similarity = 0.019836, transactionId = 3
Class = 0, Similarity = 0.037396, transactionId = 51
Class = 0, Similarity = 0.038641, transactionId = 164
Class = 0, Similarity = 0.040255, transactionId = 4
Class = 0, Similarity = 0.063324, transactionId = 89
```

Class = 0, Similarity = 0.080592, transactionId = 20

Class = 0, Similarity = 0.086480, transactionId = 8

Class = 0, Similarity = 0.093671, transactionId = 12

For the transaction id = 29474, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000648, transactionId = 1

Class = 0, Similarity = 0.000872, transactionId = 0

Class = 0, Similarity = 0.008965, transactionId = 3

Class = 0, Similarity = 0.026524, transactionId = 51

Class = 0, Similarity = 0.027770, transactionId = 164

Class = 0, Similarity = 0.029399, transactionId = 4

Class = 0, Similarity = 0.052466, transactionId = 89

Class = 0, Similarity = 0.069746, transactionId = 20

Class = 0, Similarity = 0.075654, transactionId = 8

Class = 0, Similarity = 0.082845, transactionId = 12

For the transaction id = 276481, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000004, transactionId = 1

Class = 0, Similarity = 0.000009, transactionId = 0

Class = 0, Similarity = 0.002649, transactionId = 2

Class = 0, Similarity = 0.025660, transactionId = 51

Class = 0, Similarity = 0.026906, transactionId = 164

Class = 0, Similarity = 0.028536, transactionId = 4
Class = 0, Similarity = 0.051602, transactionId = 89
Class = 0, Similarity = 0.068884, transactionId = 20
Class = 0, Similarity = 0.074795, transactionId = 8
Class = 0, Similarity = 0.081982, transactionId = 12

For the transaction id = 278846, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000005, transactionId = 0
Class = 0, Similarity = 0.000011, transactionId = 1
Class = 0, Similarity = 0.002646, transactionId = 2
Class = 0, Similarity = 0.008097, transactionId = 3
Class = 0, Similarity = 0.025656, transactionId = 51
Class = 0, Similarity = 0.026902, transactionId = 164
Class = 0, Similarity = 0.051599, transactionId = 89
Class = 0, Similarity = 0.068881, transactionId = 20
Class = 0, Similarity = 0.074790, transactionId = 8
Class = 0, Similarity = 0.081978, transactionId = 12

For the transaction id = 101565, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.001041, transactionId = 1
Class = 0, Similarity = 0.001473, transactionId = 0
Class = 0, Similarity = 0.004113, transactionId = 2

Class = 0, Similarity = 0.009565, transactionId = 3
Class = 0, Similarity = 0.027124, transactionId = 51
Class = 0, Similarity = 0.028369, transactionId = 164
Class = 0, Similarity = 0.029997, transactionId = 4
Class = 0, Similarity = 0.053064, transactionId = 89
Class = 0, Similarity = 0.070345, transactionId = 20
Class = 0, Similarity = 0.076252, transactionId = 8

For the transaction id = 260880, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000079, transactionId = 1
Class = 0, Similarity = 0.000106, transactionId = 0
Class = 0, Similarity = 0.002747, transactionId = 2
Class = 0, Similarity = 0.008198, transactionId = 3
Class = 0, Similarity = 0.025757, transactionId = 51
Class = 0, Similarity = 0.027003, transactionId = 164
Class = 0, Similarity = 0.028633, transactionId = 4
Class = 0, Similarity = 0.051699, transactionId = 89
Class = 0, Similarity = 0.068981, transactionId = 20
Class = 0, Similarity = 0.074891, transactionId = 8

For the transaction id = 214337, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000044, transactionId = 1

Class = 0, Similarity = 0.000064, transactionId = 0
Class = 0, Similarity = 0.002705, transactionId = 2
Class = 0, Similarity = 0.008156, transactionId = 3
Class = 0, Similarity = 0.025715, transactionId = 51
Class = 0, Similarity = 0.026961, transactionId = 164
Class = 0, Similarity = 0.028591, transactionId = 4
Class = 0, Similarity = 0.051657, transactionId = 89
Class = 0, Similarity = 0.068939, transactionId = 20
Class = 0, Similarity = 0.074850, transactionId = 8

For the transaction id = 201575, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000051, transactionId = 1
Class = 0, Similarity = 0.000074, transactionId = 0
Class = 0, Similarity = 0.002715, transactionId = 2
Class = 0, Similarity = 0.008166, transactionId = 3
Class = 0, Similarity = 0.025726, transactionId = 51
Class = 0, Similarity = 0.026971, transactionId = 164
Class = 0, Similarity = 0.028601, transactionId = 4
Class = 0, Similarity = 0.051668, transactionId = 89
Class = 0, Similarity = 0.068949, transactionId = 20
Class = 0, Similarity = 0.082048, transactionId = 12

For the transaction id = 81055, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.001170, transactionId = 1
Class = 0, Similarity = 0.001727, transactionId = 0
Class = 0, Similarity = 0.004367, transactionId = 2
Class = 0, Similarity = 0.009818, transactionId = 3
Class = 0, Similarity = 0.027377, transactionId = 51
Class = 0, Similarity = 0.028623, transactionId = 164
Class = 0, Similarity = 0.030251, transactionId = 4
Class = 0, Similarity = 0.053318, transactionId = 89
Class = 0, Similarity = 0.070597, transactionId = 20
Class = 0, Similarity = 0.076505, transactionId = 8

For the transaction id = 134976, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000377, transactionId = 1
Class = 0, Similarity = 0.000537, transactionId = 0
Class = 0, Similarity = 0.003177, transactionId = 2
Class = 0, Similarity = 0.008629, transactionId = 3
Class = 0, Similarity = 0.026188, transactionId = 51
Class = 0, Similarity = 0.027433, transactionId = 164
Class = 0, Similarity = 0.029063, transactionId = 4
Class = 0, Similarity = 0.052129, transactionId = 89
Class = 0, Similarity = 0.069411, transactionId = 20
Class = 0, Similarity = 0.075320, transactionId = 8

For the transaction id = 237701, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000108, transactionId = 1
Class = 0, Similarity = 0.000144, transactionId = 0
Class = 0, Similarity = 0.002785, transactionId = 2
Class = 0, Similarity = 0.008237, transactionId = 3
Class = 0, Similarity = 0.025796, transactionId = 51
Class = 0, Similarity = 0.027041, transactionId = 164
Class = 0, Similarity = 0.028671, transactionId = 4
Class = 0, Similarity = 0.051738, transactionId = 89
Class = 0, Similarity = 0.069020, transactionId = 20
Class = 0, Similarity = 0.074931, transactionId = 8

For the transaction id = 256836, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000697, transactionId = 1
Class = 0, Similarity = 0.000988, transactionId = 0
Class = 0, Similarity = 0.003628, transactionId = 2
Class = 0, Similarity = 0.009080, transactionId = 3
Class = 0, Similarity = 0.026639, transactionId = 51
Class = 0, Similarity = 0.027884, transactionId = 164
Class = 0, Similarity = 0.029513, transactionId = 4
Class = 0, Similarity = 0.052580, transactionId = 89

Class = 0, Similarity = 0.069861, transactionId = 20

Class = 0, Similarity = 0.075769, transactionId = 8

For the transaction id = 97650, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000452, transactionId = 1

Class = 0, Similarity = 0.000633, transactionId = 0

Class = 0, Similarity = 0.003274, transactionId = 2

Class = 0, Similarity = 0.008725, transactionId = 3

Class = 0, Similarity = 0.026284, transactionId = 51

Class = 0, Similarity = 0.027530, transactionId = 164

Class = 0, Similarity = 0.029159, transactionId = 4

Class = 0, Similarity = 0.052226, transactionId = 89

Class = 0, Similarity = 0.069507, transactionId = 20

Class = 0, Similarity = 0.075417, transactionId = 8

For the transaction id = 158290, and Class = 0

Similar transactions are :

Class = 0, Similarity = -0.000008, transactionId = 1

Class = 0, Similarity = 0.000009, transactionId = 0

Class = 0, Similarity = 0.002649, transactionId = 2

Class = 0, Similarity = 0.008101, transactionId = 3

Class = 0, Similarity = 0.025660, transactionId = 51

Class = 0, Similarity = 0.026906, transactionId = 164

Class = 0, Similarity = 0.028536, transactionId = 4
Class = 0, Similarity = 0.051602, transactionId = 89
Class = 0, Similarity = 0.068884, transactionId = 20
Class = 0, Similarity = 0.074795, transactionId = 8

For the transaction id = 246697, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000035, transactionId = 1
Class = 0, Similarity = 0.000056, transactionId = 0
Class = 0, Similarity = 0.002696, transactionId = 2
Class = 0, Similarity = 0.008148, transactionId = 3
Class = 0, Similarity = 0.025707, transactionId = 51
Class = 0, Similarity = 0.026952, transactionId = 164
Class = 0, Similarity = 0.028583, transactionId = 4
Class = 0, Similarity = 0.051649, transactionId = 89
Class = 0, Similarity = 0.068931, transactionId = 20
Class = 0, Similarity = 0.074841, transactionId = 8

For the transaction id = 68279, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000017, transactionId = 0
Class = 0, Similarity = 0.000045, transactionId = 1
Class = 0, Similarity = 0.002657, transactionId = 2
Class = 0, Similarity = 0.008108, transactionId = 3

Class = 0, Similarity = 0.025668, transactionId = 51
Class = 0, Similarity = 0.026913, transactionId = 164
Class = 0, Similarity = 0.028543, transactionId = 4
Class = 0, Similarity = 0.051610, transactionId = 89
Class = 0, Similarity = 0.068892, transactionId = 20
Class = 0, Similarity = 0.074801, transactionId = 8

For the transaction id = 267585, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000111, transactionId = 1
Class = 0, Similarity = 0.000163, transactionId = 0
Class = 0, Similarity = 0.002803, transactionId = 2
Class = 0, Similarity = 0.008255, transactionId = 3
Class = 0, Similarity = 0.025814, transactionId = 51
Class = 0, Similarity = 0.027059, transactionId = 164
Class = 0, Similarity = 0.028690, transactionId = 4
Class = 0, Similarity = 0.051756, transactionId = 89
Class = 0, Similarity = 0.069037, transactionId = 20
Class = 0, Similarity = 0.074948, transactionId = 8

For the transaction id = 26525, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.001585, transactionId = 1
Class = 0, Similarity = 0.002226, transactionId = 0

Class = 0, Similarity = 0.004868, transactionId = 2
Class = 0, Similarity = 0.010318, transactionId = 3
Class = 0, Similarity = 0.027878, transactionId = 51
Class = 0, Similarity = 0.029123, transactionId = 164
Class = 0, Similarity = 0.030749, transactionId = 4
Class = 0, Similarity = 0.053818, transactionId = 89
Class = 0, Similarity = 0.071097, transactionId = 20
Class = 0, Similarity = 0.077001, transactionId = 8

For the transaction id = 74422, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000293, transactionId = 1
Class = 0, Similarity = 0.000409, transactionId = 0
Class = 0, Similarity = 0.003049, transactionId = 2
Class = 0, Similarity = 0.008501, transactionId = 3
Class = 0, Similarity = 0.026059, transactionId = 51
Class = 0, Similarity = 0.027305, transactionId = 164
Class = 0, Similarity = 0.028936, transactionId = 4
Class = 0, Similarity = 0.052001, transactionId = 89
Class = 0, Similarity = 0.069283, transactionId = 20
Class = 0, Similarity = 0.075193, transactionId = 8

For the transaction id = 206357, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000238, transactionId = 1
Class = 0, Similarity = 0.000336, transactionId = 0
Class = 0, Similarity = 0.002977, transactionId = 2
Class = 0, Similarity = 0.008428, transactionId = 3
Class = 0, Similarity = 0.025988, transactionId = 51
Class = 0, Similarity = 0.027233, transactionId = 164
Class = 0, Similarity = 0.028863, transactionId = 4
Class = 0, Similarity = 0.051929, transactionId = 89
Class = 0, Similarity = 0.075120, transactionId = 8
Class = 0, Similarity = 0.082309, transactionId = 12

For the transaction id = 257395, and Class = 0

Similar transactions are :

Class = 0, Similarity = -0.000002, transactionId = 1
Class = 0, Similarity = 0.000006, transactionId = 0
Class = 0, Similarity = 0.002647, transactionId = 2
Class = 0, Similarity = 0.008098, transactionId = 3
Class = 0, Similarity = 0.025657, transactionId = 51
Class = 0, Similarity = 0.026903, transactionId = 164
Class = 0, Similarity = 0.028534, transactionId = 4
Class = 0, Similarity = 0.051600, transactionId = 89
Class = 0, Similarity = 0.068881, transactionId = 20
Class = 0, Similarity = 0.074792, transactionId = 8

For the transaction id = 283656, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000020, transactionId = 1
Class = 0, Similarity = 0.000042, transactionId = 0
Class = 0, Similarity = 0.002683, transactionId = 2
Class = 0, Similarity = 0.008134, transactionId = 3
Class = 0, Similarity = 0.025694, transactionId = 51
Class = 0, Similarity = 0.026939, transactionId = 164
Class = 0, Similarity = 0.028570, transactionId = 4
Class = 0, Similarity = 0.051636, transactionId = 89
Class = 0, Similarity = 0.068917, transactionId = 20
Class = 0, Similarity = 0.074828, transactionId = 8

For the transaction id = 231156, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000119, transactionId = 1
Class = 0, Similarity = 0.000163, transactionId = 0
Class = 0, Similarity = 0.002804, transactionId = 2
Class = 0, Similarity = 0.008255, transactionId = 3
Class = 0, Similarity = 0.025815, transactionId = 51
Class = 0, Similarity = 0.027060, transactionId = 164
Class = 0, Similarity = 0.028689, transactionId = 4
Class = 0, Similarity = 0.051757, transactionId = 89
Class = 0, Similarity = 0.069038, transactionId = 20

Class = 0, Similarity = 0.074950, transactionId = 8

For the transaction id = 38442, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.005035, transactionId = 1

Class = 0, Similarity = 0.007156, transactionId = 0

Class = 0, Similarity = 0.009797, transactionId = 2

Class = 0, Similarity = 0.015245, transactionId = 3

Class = 0, Similarity = 0.032804, transactionId = 51

Class = 0, Similarity = 0.034050, transactionId = 164

Class = 0, Similarity = 0.035672, transactionId = 4

Class = 0, Similarity = 0.058739, transactionId = 89

Class = 0, Similarity = 0.076012, transactionId = 20

Class = 0, Similarity = 0.081909, transactionId = 8

For the transaction id = 225485, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000535, transactionId = 1

Class = 0, Similarity = 0.000755, transactionId = 0

Class = 0, Similarity = 0.003396, transactionId = 2

Class = 0, Similarity = 0.008847, transactionId = 3

Class = 0, Similarity = 0.026406, transactionId = 51

Class = 0, Similarity = 0.027652, transactionId = 164

Class = 0, Similarity = 0.029282, transactionId = 4

Class = 0, Similarity = 0.052348, transactionId = 89

Class = 0, Similarity = 0.069629, transactionId = 20

Class = 0, Similarity = 0.075538, transactionId = 8

For the transaction id = 92410, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000981, transactionId = 1

Class = 0, Similarity = 0.001361, transactionId = 0

Class = 0, Similarity = 0.004002, transactionId = 2

Class = 0, Similarity = 0.009452, transactionId = 3

Class = 0, Similarity = 0.027012, transactionId = 51

Class = 0, Similarity = 0.028257, transactionId = 164

Class = 0, Similarity = 0.029885, transactionId = 4

Class = 0, Similarity = 0.052952, transactionId = 89

Class = 0, Similarity = 0.070233, transactionId = 20

Class = 0, Similarity = 0.076140, transactionId = 8

For the transaction id = 10828, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000809, transactionId = 1

Class = 0, Similarity = 0.001189, transactionId = 0

Class = 0, Similarity = 0.003829, transactionId = 2

Class = 0, Similarity = 0.009283, transactionId = 3

Class = 0, Similarity = 0.026839, transactionId = 51

Class = 0, Similarity = 0.028086, transactionId = 164

Class = 0, Similarity = 0.029712, transactionId = 4

Class = 0, Similarity = 0.052781, transactionId = 89

Class = 0, Similarity = 0.070060, transactionId = 20

Class = 0, Similarity = 0.075973, transactionId = 8

For the transaction id = 61461, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000330, transactionId = 1

Class = 0, Similarity = 0.000440, transactionId = 0

Class = 0, Similarity = 0.003081, transactionId = 2

Class = 0, Similarity = 0.008532, transactionId = 3

Class = 0, Similarity = 0.026091, transactionId = 51

Class = 0, Similarity = 0.027337, transactionId = 164

Class = 0, Similarity = 0.028966, transactionId = 4

Class = 0, Similarity = 0.052033, transactionId = 89

Class = 0, Similarity = 0.069315, transactionId = 20

Class = 0, Similarity = 0.075223, transactionId = 8

For the transaction id = 134354, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000813, transactionId = 1

Class = 0, Similarity = 0.001163, transactionId = 0

Class = 0, Similarity = 0.003804, transactionId = 2

Class = 0, Similarity = 0.009255, transactionId = 3
Class = 0, Similarity = 0.026814, transactionId = 51
Class = 0, Similarity = 0.028059, transactionId = 164
Class = 0, Similarity = 0.029689, transactionId = 4
Class = 0, Similarity = 0.052755, transactionId = 89
Class = 0, Similarity = 0.070036, transactionId = 20
Class = 0, Similarity = 0.075947, transactionId = 8

For the transaction id = 45265, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000671, transactionId = 1
Class = 0, Similarity = 0.000892, transactionId = 0
Class = 0, Similarity = 0.003534, transactionId = 2
Class = 0, Similarity = 0.008984, transactionId = 3
Class = 0, Similarity = 0.026543, transactionId = 51
Class = 0, Similarity = 0.027789, transactionId = 164
Class = 0, Similarity = 0.029418, transactionId = 4
Class = 0, Similarity = 0.052485, transactionId = 89
Class = 0, Similarity = 0.069767, transactionId = 20
Class = 0, Similarity = 0.075675, transactionId = 8

For the transaction id = 151374, and Class = 0

Similar transactions are :

Class = 0, Similarity = -0.000007, transactionId = 1

Class = 0, Similarity = 0.000019, transactionId = 0
Class = 0, Similarity = 0.002659, transactionId = 2
Class = 0, Similarity = 0.008111, transactionId = 3
Class = 0, Similarity = 0.025670, transactionId = 51
Class = 0, Similarity = 0.026915, transactionId = 164
Class = 0, Similarity = 0.028547, transactionId = 4
Class = 0, Similarity = 0.051612, transactionId = 89
Class = 0, Similarity = 0.068893, transactionId = 20
Class = 0, Similarity = 0.074804, transactionId = 8

For the transaction id = 219257, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.017461, transactionId = 1
Class = 0, Similarity = 0.024708, transactionId = 0
Class = 0, Similarity = 0.027353, transactionId = 2
Class = 0, Similarity = 0.032789, transactionId = 3
Class = 0, Similarity = 0.050351, transactionId = 51
Class = 0, Similarity = 0.051596, transactionId = 164
Class = 0, Similarity = 0.053193, transactionId = 4
Class = 0, Similarity = 0.076260, transactionId = 89
Class = 0, Similarity = 0.093507, transactionId = 20
Class = 0, Similarity = 0.099373, transactionId = 8

For the transaction id = 49275, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.001600, transactionId = 1
Class = 0, Similarity = 0.002301, transactionId = 0
Class = 0, Similarity = 0.004941, transactionId = 2
Class = 0, Similarity = 0.010391, transactionId = 3
Class = 0, Similarity = 0.027951, transactionId = 51
Class = 0, Similarity = 0.029196, transactionId = 164
Class = 0, Similarity = 0.030825, transactionId = 4
Class = 0, Similarity = 0.053891, transactionId = 89
Class = 0, Similarity = 0.071170, transactionId = 20
Class = 0, Similarity = 0.077076, transactionId = 8

For the transaction id = 113769, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000403, transactionId = 1
Class = 0, Similarity = 0.000546, transactionId = 0
Class = 0, Similarity = 0.003187, transactionId = 2
Class = 0, Similarity = 0.008638, transactionId = 3
Class = 0, Similarity = 0.026197, transactionId = 51
Class = 0, Similarity = 0.027443, transactionId = 164
Class = 0, Similarity = 0.029072, transactionId = 4
Class = 0, Similarity = 0.052139, transactionId = 89
Class = 0, Similarity = 0.069420, transactionId = 20
Class = 0, Similarity = 0.075329, transactionId = 8

For the transaction id = 205650, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000062, transactionId = 1
Class = 0, Similarity = 0.000073, transactionId = 0
Class = 0, Similarity = 0.002714, transactionId = 2
Class = 0, Similarity = 0.008165, transactionId = 3
Class = 0, Similarity = 0.025724, transactionId = 51
Class = 0, Similarity = 0.026970, transactionId = 164
Class = 0, Similarity = 0.028600, transactionId = 4
Class = 0, Similarity = 0.051667, transactionId = 89
Class = 0, Similarity = 0.068949, transactionId = 20
Class = 0, Similarity = 0.074858, transactionId = 8

For the transaction id = 250467, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000522, transactionId = 1
Class = 0, Similarity = 0.000735, transactionId = 0
Class = 0, Similarity = 0.003376, transactionId = 2
Class = 0, Similarity = 0.008827, transactionId = 3
Class = 0, Similarity = 0.026386, transactionId = 51
Class = 0, Similarity = 0.027632, transactionId = 164
Class = 0, Similarity = 0.029260, transactionId = 4
Class = 0, Similarity = 0.052328, transactionId = 89

Class = 0, Similarity = 0.069609, transactionId = 20

Class = 0, Similarity = 0.075517, transactionId = 8

For the transaction id = 194599, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000200, transactionId = 1

Class = 0, Similarity = 0.000275, transactionId = 0

Class = 0, Similarity = 0.002916, transactionId = 2

Class = 0, Similarity = 0.008367, transactionId = 3

Class = 0, Similarity = 0.025926, transactionId = 51

Class = 0, Similarity = 0.027172, transactionId = 164

Class = 0, Similarity = 0.028801, transactionId = 4

Class = 0, Similarity = 0.051868, transactionId = 89

Class = 0, Similarity = 0.069150, transactionId = 20

Class = 0, Similarity = 0.075060, transactionId = 8

For the transaction id = 266912, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000136, transactionId = 1

Class = 0, Similarity = 0.000184, transactionId = 0

Class = 0, Similarity = 0.002825, transactionId = 2

Class = 0, Similarity = 0.008276, transactionId = 3

Class = 0, Similarity = 0.025835, transactionId = 51

Class = 0, Similarity = 0.027081, transactionId = 164

Class = 0, Similarity = 0.028711, transactionId = 4
Class = 0, Similarity = 0.051777, transactionId = 89
Class = 0, Similarity = 0.069059, transactionId = 20
Class = 0, Similarity = 0.074969, transactionId = 8

For the transaction id = 228215, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000403, transactionId = 1
Class = 0, Similarity = 0.000563, transactionId = 0
Class = 0, Similarity = 0.003204, transactionId = 2
Class = 0, Similarity = 0.008656, transactionId = 3
Class = 0, Similarity = 0.026215, transactionId = 51
Class = 0, Similarity = 0.027460, transactionId = 164
Class = 0, Similarity = 0.029089, transactionId = 4
Class = 0, Similarity = 0.052156, transactionId = 89
Class = 0, Similarity = 0.069438, transactionId = 20
Class = 0, Similarity = 0.075347, transactionId = 8

For the transaction id = 259706, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000035, transactionId = 1
Class = 0, Similarity = 0.000047, transactionId = 0
Class = 0, Similarity = 0.002688, transactionId = 2
Class = 0, Similarity = 0.008139, transactionId = 3

Class = 0, Similarity = 0.025698, transactionId = 51
Class = 0, Similarity = 0.026944, transactionId = 164
Class = 0, Similarity = 0.028574, transactionId = 4
Class = 0, Similarity = 0.051640, transactionId = 89
Class = 0, Similarity = 0.068922, transactionId = 20
Class = 0, Similarity = 0.074833, transactionId = 8

For the transaction id = 149066, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000063, transactionId = 1
Class = 0, Similarity = 0.000111, transactionId = 0
Class = 0, Similarity = 0.002751, transactionId = 2
Class = 0, Similarity = 0.008203, transactionId = 3
Class = 0, Similarity = 0.025761, transactionId = 51
Class = 0, Similarity = 0.027007, transactionId = 164
Class = 0, Similarity = 0.028637, transactionId = 4
Class = 0, Similarity = 0.051704, transactionId = 89
Class = 0, Similarity = 0.068985, transactionId = 20
Class = 0, Similarity = 0.074896, transactionId = 8

For the transaction id = 68119, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000914, transactionId = 1
Class = 0, Similarity = 0.001306, transactionId = 0

Class = 0, Similarity = 0.003947, transactionId = 2
Class = 0, Similarity = 0.009399, transactionId = 3
Class = 0, Similarity = 0.026956, transactionId = 51
Class = 0, Similarity = 0.028202, transactionId = 164
Class = 0, Similarity = 0.029830, transactionId = 4
Class = 0, Similarity = 0.052897, transactionId = 89
Class = 0, Similarity = 0.070178, transactionId = 20
Class = 0, Similarity = 0.076085, transactionId = 8

For the transaction id = 225255, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.001219, transactionId = 1
Class = 0, Similarity = 0.001714, transactionId = 0
Class = 0, Similarity = 0.004355, transactionId = 2
Class = 0, Similarity = 0.009806, transactionId = 3
Class = 0, Similarity = 0.027365, transactionId = 51
Class = 0, Similarity = 0.028611, transactionId = 164
Class = 0, Similarity = 0.030238, transactionId = 4
Class = 0, Similarity = 0.053306, transactionId = 89
Class = 0, Similarity = 0.070586, transactionId = 20
Class = 0, Similarity = 0.076492, transactionId = 8

For the transaction id = 21934, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.025909, transactionId = 1
Class = 0, Similarity = 0.036592, transactionId = 0
Class = 0, Similarity = 0.039238, transactionId = 2
Class = 0, Similarity = 0.044667, transactionId = 3
Class = 0, Similarity = 0.062224, transactionId = 51
Class = 0, Similarity = 0.063468, transactionId = 164
Class = 0, Similarity = 0.065049, transactionId = 4
Class = 0, Similarity = 0.088112, transactionId = 89
Class = 0, Similarity = 0.105338, transactionId = 20
Class = 0, Similarity = 0.111181, transactionId = 8

For the transaction id = 105030, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.004551, transactionId = 1
Class = 0, Similarity = 0.006413, transactionId = 0
Class = 0, Similarity = 0.009055, transactionId = 2
Class = 0, Similarity = 0.014504, transactionId = 3
Class = 0, Similarity = 0.032064, transactionId = 51
Class = 0, Similarity = 0.033309, transactionId = 164
Class = 0, Similarity = 0.034932, transactionId = 4
Class = 0, Similarity = 0.057999, transactionId = 89
Class = 0, Similarity = 0.075273, transactionId = 20
Class = 0, Similarity = 0.081172, transactionId = 8

For the transaction id = 114027, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000113, transactionId = 1
Class = 0, Similarity = 0.000148, transactionId = 0
Class = 0, Similarity = 0.002788, transactionId = 2
Class = 0, Similarity = 0.008240, transactionId = 3
Class = 0, Similarity = 0.025799, transactionId = 51
Class = 0, Similarity = 0.027044, transactionId = 164
Class = 0, Similarity = 0.028675, transactionId = 4
Class = 0, Similarity = 0.051741, transactionId = 89
Class = 0, Similarity = 0.069023, transactionId = 20
Class = 0, Similarity = 0.074932, transactionId = 8

For the transaction id = 178329, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000065, transactionId = 1
Class = 0, Similarity = 0.000080, transactionId = 0
Class = 0, Similarity = 0.002721, transactionId = 2
Class = 0, Similarity = 0.008172, transactionId = 3
Class = 0, Similarity = 0.025732, transactionId = 51
Class = 0, Similarity = 0.026977, transactionId = 164
Class = 0, Similarity = 0.028607, transactionId = 4
Class = 0, Similarity = 0.051674, transactionId = 89
Class = 0, Similarity = 0.068956, transactionId = 20

Class = 0, Similarity = 0.074866, transactionId = 8

For the transaction id = 109526, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000130, transactionId = 1

Class = 0, Similarity = 0.000161, transactionId = 0

Class = 0, Similarity = 0.002801, transactionId = 2

Class = 0, Similarity = 0.008253, transactionId = 3

Class = 0, Similarity = 0.025812, transactionId = 51

Class = 0, Similarity = 0.027058, transactionId = 164

Class = 0, Similarity = 0.028688, transactionId = 4

Class = 0, Similarity = 0.051754, transactionId = 89

Class = 0, Similarity = 0.069036, transactionId = 20

Class = 0, Similarity = 0.074945, transactionId = 8

For the transaction id = 32278, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000257, transactionId = 1

Class = 0, Similarity = 0.000335, transactionId = 0

Class = 0, Similarity = 0.002975, transactionId = 2

Class = 0, Similarity = 0.008426, transactionId = 3

Class = 0, Similarity = 0.025986, transactionId = 51

Class = 0, Similarity = 0.027232, transactionId = 164

Class = 0, Similarity = 0.028860, transactionId = 4

Class = 0, Similarity = 0.051928, transactionId = 89

Class = 0, Similarity = 0.069210, transactionId = 20

Class = 0, Similarity = 0.075118, transactionId = 8

For the transaction id = 233533, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000013, transactionId = 0

Class = 0, Similarity = 0.000014, transactionId = 1

Class = 0, Similarity = 0.002654, transactionId = 2

Class = 0, Similarity = 0.008105, transactionId = 3

Class = 0, Similarity = 0.025664, transactionId = 51

Class = 0, Similarity = 0.026910, transactionId = 164

Class = 0, Similarity = 0.028540, transactionId = 4

Class = 0, Similarity = 0.051607, transactionId = 89

Class = 0, Similarity = 0.068889, transactionId = 20

Class = 0, Similarity = 0.074798, transactionId = 8

For the transaction id = 76922, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000018, transactionId = 0

Class = 0, Similarity = 0.000034, transactionId = 1

Class = 0, Similarity = 0.002658, transactionId = 2

Class = 0, Similarity = 0.008109, transactionId = 3

Class = 0, Similarity = 0.026914, transactionId = 164

Class = 0, Similarity = 0.028543, transactionId = 4
Class = 0, Similarity = 0.051611, transactionId = 89
Class = 0, Similarity = 0.068893, transactionId = 20
Class = 0, Similarity = 0.074802, transactionId = 8
Class = 0, Similarity = 0.081990, transactionId = 12

For the transaction id = 187045, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.002088, transactionId = 1
Class = 0, Similarity = 0.002946, transactionId = 0
Class = 0, Similarity = 0.005588, transactionId = 2
Class = 0, Similarity = 0.011037, transactionId = 3
Class = 0, Similarity = 0.028598, transactionId = 51
Class = 0, Similarity = 0.029843, transactionId = 164
Class = 0, Similarity = 0.031469, transactionId = 4
Class = 0, Similarity = 0.054537, transactionId = 89
Class = 0, Similarity = 0.071815, transactionId = 20
Class = 0, Similarity = 0.077720, transactionId = 8

For the transaction id = 149100, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000011, transactionId = 0
Class = 0, Similarity = 0.000018, transactionId = 1
Class = 0, Similarity = 0.002651, transactionId = 2

Class = 0, Similarity = 0.008103, transactionId = 3
Class = 0, Similarity = 0.025662, transactionId = 51
Class = 0, Similarity = 0.026908, transactionId = 164
Class = 0, Similarity = 0.028537, transactionId = 4
Class = 0, Similarity = 0.051604, transactionId = 89
Class = 0, Similarity = 0.068886, transactionId = 20
Class = 0, Similarity = 0.074796, transactionId = 8

For the transaction id = 133186, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000007, transactionId = 1
Class = 0, Similarity = 0.000022, transactionId = 0
Class = 0, Similarity = 0.002663, transactionId = 2
Class = 0, Similarity = 0.008114, transactionId = 3
Class = 0, Similarity = 0.025673, transactionId = 51
Class = 0, Similarity = 0.026919, transactionId = 164
Class = 0, Similarity = 0.028551, transactionId = 4
Class = 0, Similarity = 0.051615, transactionId = 89
Class = 0, Similarity = 0.068897, transactionId = 20
Class = 0, Similarity = 0.074807, transactionId = 8

For the transaction id = 89165, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000195, transactionId = 1

Class = 0, Similarity = 0.000274, transactionId = 0
Class = 0, Similarity = 0.002915, transactionId = 2
Class = 0, Similarity = 0.008366, transactionId = 3
Class = 0, Similarity = 0.025925, transactionId = 51
Class = 0, Similarity = 0.027170, transactionId = 164
Class = 0, Similarity = 0.028799, transactionId = 4
Class = 0, Similarity = 0.051867, transactionId = 89
Class = 0, Similarity = 0.069149, transactionId = 20
Class = 0, Similarity = 0.075057, transactionId = 8

For the transaction id = 138728, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.001946, transactionId = 1
Class = 0, Similarity = 0.002756, transactionId = 0
Class = 0, Similarity = 0.005397, transactionId = 2
Class = 0, Similarity = 0.010846, transactionId = 3
Class = 0, Similarity = 0.028407, transactionId = 51
Class = 0, Similarity = 0.029652, transactionId = 164
Class = 0, Similarity = 0.031278, transactionId = 4
Class = 0, Similarity = 0.054346, transactionId = 89
Class = 0, Similarity = 0.071625, transactionId = 20
Class = 0, Similarity = 0.077529, transactionId = 8

For the transaction id = 161808, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000011, transactionId = 1
Class = 0, Similarity = 0.000016, transactionId = 0
Class = 0, Similarity = 0.002656, transactionId = 2
Class = 0, Similarity = 0.008108, transactionId = 3
Class = 0, Similarity = 0.025667, transactionId = 51
Class = 0, Similarity = 0.026913, transactionId = 164
Class = 0, Similarity = 0.028544, transactionId = 4
Class = 0, Similarity = 0.051609, transactionId = 89
Class = 0, Similarity = 0.068891, transactionId = 20
Class = 0, Similarity = 0.074802, transactionId = 8

For the transaction id = 15816, and Class = 0

Similar transactions are :

Class = 0, Similarity = -0.000001, transactionId = 0
Class = 0, Similarity = 0.000059, transactionId = 1
Class = 0, Similarity = 0.002640, transactionId = 2
Class = 0, Similarity = 0.008091, transactionId = 3
Class = 0, Similarity = 0.025651, transactionId = 51
Class = 0, Similarity = 0.026897, transactionId = 164
Class = 0, Similarity = 0.028526, transactionId = 4
Class = 0, Similarity = 0.051593, transactionId = 89
Class = 0, Similarity = 0.068875, transactionId = 20
Class = 0, Similarity = 0.074783, transactionId = 8

For the transaction id = 150994, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000094, transactionId = 1
Class = 0, Similarity = 0.000136, transactionId = 0
Class = 0, Similarity = 0.002776, transactionId = 2
Class = 0, Similarity = 0.008227, transactionId = 3
Class = 0, Similarity = 0.025786, transactionId = 51
Class = 0, Similarity = 0.027032, transactionId = 164
Class = 0, Similarity = 0.028663, transactionId = 4
Class = 0, Similarity = 0.051728, transactionId = 89
Class = 0, Similarity = 0.069010, transactionId = 20
Class = 0, Similarity = 0.074920, transactionId = 8

For the transaction id = 79591, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000437, transactionId = 1
Class = 0, Similarity = 0.000602, transactionId = 0
Class = 0, Similarity = 0.003243, transactionId = 2
Class = 0, Similarity = 0.008694, transactionId = 3
Class = 0, Similarity = 0.026253, transactionId = 51
Class = 0, Similarity = 0.027499, transactionId = 164
Class = 0, Similarity = 0.029128, transactionId = 4
Class = 0, Similarity = 0.052195, transactionId = 89

Class = 0, Similarity = 0.069476, transactionId = 20

Class = 0, Similarity = 0.075384, transactionId = 8

For the transaction id = 36749, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.002764, transactionId = 1

Class = 0, Similarity = 0.003902, transactionId = 0

Class = 0, Similarity = 0.006542, transactionId = 2

Class = 0, Similarity = 0.011991, transactionId = 3

Class = 0, Similarity = 0.029552, transactionId = 51

Class = 0, Similarity = 0.030798, transactionId = 164

Class = 0, Similarity = 0.032423, transactionId = 4

Class = 0, Similarity = 0.055490, transactionId = 89

Class = 0, Similarity = 0.072768, transactionId = 20

Class = 0, Similarity = 0.078669, transactionId = 8

For the transaction id = 28828, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000025, transactionId = 0

Class = 0, Similarity = 0.000060, transactionId = 1

Class = 0, Similarity = 0.002666, transactionId = 2

Class = 0, Similarity = 0.008117, transactionId = 3

Class = 0, Similarity = 0.025676, transactionId = 51

Class = 0, Similarity = 0.026922, transactionId = 164

Class = 0, Similarity = 0.028551, transactionId = 4
Class = 0, Similarity = 0.051618, transactionId = 89
Class = 0, Similarity = 0.068901, transactionId = 20
Class = 0, Similarity = 0.074809, transactionId = 8

For the transaction id = 232448, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000897, transactionId = 1
Class = 0, Similarity = 0.001270, transactionId = 0
Class = 0, Similarity = 0.003910, transactionId = 2
Class = 0, Similarity = 0.009361, transactionId = 3
Class = 0, Similarity = 0.026920, transactionId = 51
Class = 0, Similarity = 0.028166, transactionId = 164
Class = 0, Similarity = 0.029794, transactionId = 4
Class = 0, Similarity = 0.052861, transactionId = 89
Class = 0, Similarity = 0.070142, transactionId = 20
Class = 0, Similarity = 0.076050, transactionId = 8

For the transaction id = 28195, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000194, transactionId = 1
Class = 0, Similarity = 0.000228, transactionId = 0
Class = 0, Similarity = 0.002870, transactionId = 2
Class = 0, Similarity = 0.008322, transactionId = 3

Class = 0, Similarity = 0.025880, transactionId = 51
Class = 0, Similarity = 0.027126, transactionId = 164
Class = 0, Similarity = 0.028754, transactionId = 4
Class = 0, Similarity = 0.051822, transactionId = 89
Class = 0, Similarity = 0.069105, transactionId = 20
Class = 0, Similarity = 0.075012, transactionId = 8

For the transaction id = 240146, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.001772, transactionId = 1
Class = 0, Similarity = 0.002509, transactionId = 0
Class = 0, Similarity = 0.005150, transactionId = 2
Class = 0, Similarity = 0.010601, transactionId = 3
Class = 0, Similarity = 0.028160, transactionId = 51
Class = 0, Similarity = 0.029406, transactionId = 164
Class = 0, Similarity = 0.031032, transactionId = 4
Class = 0, Similarity = 0.054100, transactionId = 89
Class = 0, Similarity = 0.071378, transactionId = 20
Class = 0, Similarity = 0.077285, transactionId = 8

For the transaction id = 240449, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000050, transactionId = 1
Class = 0, Similarity = 0.000059, transactionId = 0

Class = 0, Similarity = 0.002700, transactionId = 2
Class = 0, Similarity = 0.008151, transactionId = 3
Class = 0, Similarity = 0.025711, transactionId = 51
Class = 0, Similarity = 0.026956, transactionId = 164
Class = 0, Similarity = 0.028586, transactionId = 4
Class = 0, Similarity = 0.051653, transactionId = 89
Class = 0, Similarity = 0.068935, transactionId = 20
Class = 0, Similarity = 0.074845, transactionId = 8

For the transaction id = 49296, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000851, transactionId = 1
Class = 0, Similarity = 0.001216, transactionId = 0
Class = 0, Similarity = 0.003857, transactionId = 2
Class = 0, Similarity = 0.009308, transactionId = 3
Class = 0, Similarity = 0.026867, transactionId = 51
Class = 0, Similarity = 0.028112, transactionId = 164
Class = 0, Similarity = 0.029741, transactionId = 4
Class = 0, Similarity = 0.052808, transactionId = 89
Class = 0, Similarity = 0.070088, transactionId = 20
Class = 0, Similarity = 0.076002, transactionId = 8

For the transaction id = 14176, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000174, transactionId = 1
Class = 0, Similarity = 0.000290, transactionId = 0
Class = 0, Similarity = 0.002930, transactionId = 2
Class = 0, Similarity = 0.008383, transactionId = 3
Class = 0, Similarity = 0.025940, transactionId = 51
Class = 0, Similarity = 0.027186, transactionId = 164
Class = 0, Similarity = 0.028819, transactionId = 4
Class = 0, Similarity = 0.051882, transactionId = 89
Class = 0, Similarity = 0.069163, transactionId = 20
Class = 0, Similarity = 0.075083, transactionId = 8

For the transaction id = 80419, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.002783, transactionId = 1
Class = 0, Similarity = 0.003909, transactionId = 0
Class = 0, Similarity = 0.006549, transactionId = 2
Class = 0, Similarity = 0.011999, transactionId = 3
Class = 0, Similarity = 0.029559, transactionId = 51
Class = 0, Similarity = 0.030804, transactionId = 164
Class = 0, Similarity = 0.032429, transactionId = 4
Class = 0, Similarity = 0.055497, transactionId = 89
Class = 0, Similarity = 0.072774, transactionId = 20
Class = 0, Similarity = 0.078677, transactionId = 8

For the transaction id = 210194, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000642, transactionId = 1
Class = 0, Similarity = 0.000895, transactionId = 0
Class = 0, Similarity = 0.003536, transactionId = 2
Class = 0, Similarity = 0.008987, transactionId = 3
Class = 0, Similarity = 0.026546, transactionId = 51
Class = 0, Similarity = 0.027792, transactionId = 164
Class = 0, Similarity = 0.029421, transactionId = 4
Class = 0, Similarity = 0.052488, transactionId = 89
Class = 0, Similarity = 0.069769, transactionId = 20
Class = 0, Similarity = 0.075677, transactionId = 8

For the transaction id = 177473, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000049, transactionId = 1
Class = 0, Similarity = 0.000081, transactionId = 0
Class = 0, Similarity = 0.002721, transactionId = 2
Class = 0, Similarity = 0.008173, transactionId = 3
Class = 0, Similarity = 0.025732, transactionId = 51
Class = 0, Similarity = 0.026977, transactionId = 164
Class = 0, Similarity = 0.028608, transactionId = 4
Class = 0, Similarity = 0.051674, transactionId = 89
Class = 0, Similarity = 0.068956, transactionId = 20

Class = 0, Similarity = 0.074867, transactionId = 8

For the transaction id = 81436, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000015, transactionId = 0

Class = 0, Similarity = 0.000023, transactionId = 1

Class = 0, Similarity = 0.002656, transactionId = 2

Class = 0, Similarity = 0.008107, transactionId = 3

Class = 0, Similarity = 0.025666, transactionId = 51

Class = 0, Similarity = 0.026912, transactionId = 164

Class = 0, Similarity = 0.028541, transactionId = 4

Class = 0, Similarity = 0.051608, transactionId = 89

Class = 0, Similarity = 0.068890, transactionId = 20

Class = 0, Similarity = 0.074800, transactionId = 8

For the transaction id = 104674, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000009, transactionId = 1

Class = 0, Similarity = 0.000019, transactionId = 0

Class = 0, Similarity = 0.002659, transactionId = 2

Class = 0, Similarity = 0.008111, transactionId = 3

Class = 0, Similarity = 0.025670, transactionId = 51

Class = 0, Similarity = 0.026915, transactionId = 164

Class = 0, Similarity = 0.028546, transactionId = 4

Class = 0, Similarity = 0.051612, transactionId = 89

Class = 0, Similarity = 0.068894, transactionId = 20

Class = 0, Similarity = 0.074804, transactionId = 8

For the transaction id = 102058, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000210, transactionId = 1

Class = 0, Similarity = 0.000309, transactionId = 0

Class = 0, Similarity = 0.002949, transactionId = 2

Class = 0, Similarity = 0.008401, transactionId = 3

Class = 0, Similarity = 0.025960, transactionId = 51

Class = 0, Similarity = 0.027205, transactionId = 164

Class = 0, Similarity = 0.028835, transactionId = 4

Class = 0, Similarity = 0.051902, transactionId = 89

Class = 0, Similarity = 0.069183, transactionId = 20

Class = 0, Similarity = 0.075097, transactionId = 8

For the transaction id = 237523, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000941, transactionId = 1

Class = 0, Similarity = 0.001320, transactionId = 0

Class = 0, Similarity = 0.003961, transactionId = 2

Class = 0, Similarity = 0.009412, transactionId = 3

Class = 0, Similarity = 0.026971, transactionId = 51

Class = 0, Similarity = 0.028217, transactionId = 164

Class = 0, Similarity = 0.029845, transactionId = 4

Class = 0, Similarity = 0.052912, transactionId = 89

Class = 0, Similarity = 0.070193, transactionId = 20

Class = 0, Similarity = 0.076101, transactionId = 8

For the transaction id = 51750, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000421, transactionId = 1

Class = 0, Similarity = 0.000596, transactionId = 0

Class = 0, Similarity = 0.003236, transactionId = 2

Class = 0, Similarity = 0.008689, transactionId = 3

Class = 0, Similarity = 0.026247, transactionId = 51

Class = 0, Similarity = 0.027492, transactionId = 164

Class = 0, Similarity = 0.029124, transactionId = 4

Class = 0, Similarity = 0.052188, transactionId = 89

Class = 0, Similarity = 0.069470, transactionId = 20

Class = 0, Similarity = 0.075380, transactionId = 8

For the transaction id = 93581, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000073, transactionId = 1

Class = 0, Similarity = 0.000086, transactionId = 0

Class = 0, Similarity = 0.002727, transactionId = 2

Class = 0, Similarity = 0.008178, transactionId = 3
Class = 0, Similarity = 0.025737, transactionId = 51
Class = 0, Similarity = 0.026983, transactionId = 164
Class = 0, Similarity = 0.028614, transactionId = 4
Class = 0, Similarity = 0.051679, transactionId = 89
Class = 0, Similarity = 0.068961, transactionId = 20
Class = 0, Similarity = 0.074871, transactionId = 8

For the transaction id = 228491, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000023, transactionId = 1
Class = 0, Similarity = 0.000040, transactionId = 0
Class = 0, Similarity = 0.002681, transactionId = 2
Class = 0, Similarity = 0.008132, transactionId = 3
Class = 0, Similarity = 0.025691, transactionId = 51
Class = 0, Similarity = 0.026937, transactionId = 164
Class = 0, Similarity = 0.028567, transactionId = 4
Class = 0, Similarity = 0.051634, transactionId = 89
Class = 0, Similarity = 0.068915, transactionId = 20
Class = 0, Similarity = 0.074826, transactionId = 8

For the transaction id = 217792, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000843, transactionId = 1

Class = 0, Similarity = 0.001191, transactionId = 0
Class = 0, Similarity = 0.003831, transactionId = 2
Class = 0, Similarity = 0.009282, transactionId = 3
Class = 0, Similarity = 0.026841, transactionId = 51
Class = 0, Similarity = 0.028087, transactionId = 164
Class = 0, Similarity = 0.029716, transactionId = 4
Class = 0, Similarity = 0.052783, transactionId = 89
Class = 0, Similarity = 0.070063, transactionId = 20
Class = 0, Similarity = 0.075971, transactionId = 8

For the transaction id = 276741, and Class = 0

Similar transactions are :

Class = 0, Similarity = -0.000000, transactionId = 1
Class = 0, Similarity = 0.000005, transactionId = 0
Class = 0, Similarity = 0.002646, transactionId = 2
Class = 0, Similarity = 0.008097, transactionId = 3
Class = 0, Similarity = 0.025656, transactionId = 51
Class = 0, Similarity = 0.026902, transactionId = 164
Class = 0, Similarity = 0.028532, transactionId = 4
Class = 0, Similarity = 0.051599, transactionId = 89
Class = 0, Similarity = 0.068880, transactionId = 20
Class = 0, Similarity = 0.074791, transactionId = 8

For the transaction id = 71345, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000014, transactionId = 0
Class = 0, Similarity = 0.000031, transactionId = 1
Class = 0, Similarity = 0.002655, transactionId = 2
Class = 0, Similarity = 0.008106, transactionId = 3
Class = 0, Similarity = 0.025665, transactionId = 51
Class = 0, Similarity = 0.026911, transactionId = 164
Class = 0, Similarity = 0.028541, transactionId = 4
Class = 0, Similarity = 0.051607, transactionId = 89
Class = 0, Similarity = 0.068889, transactionId = 20
Class = 0, Similarity = 0.074799, transactionId = 8

For the transaction id = 234744, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000064, transactionId = 1
Class = 0, Similarity = 0.000077, transactionId = 0
Class = 0, Similarity = 0.002718, transactionId = 2
Class = 0, Similarity = 0.008169, transactionId = 3
Class = 0, Similarity = 0.025729, transactionId = 51
Class = 0, Similarity = 0.026974, transactionId = 164
Class = 0, Similarity = 0.028604, transactionId = 4
Class = 0, Similarity = 0.051671, transactionId = 89
Class = 0, Similarity = 0.068953, transactionId = 20
Class = 0, Similarity = 0.074863, transactionId = 8

For the transaction id = 7730, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000596, transactionId = 1
Class = 0, Similarity = 0.000743, transactionId = 0
Class = 0, Similarity = 0.003384, transactionId = 2
Class = 0, Similarity = 0.008837, transactionId = 3
Class = 0, Similarity = 0.026394, transactionId = 51
Class = 0, Similarity = 0.027639, transactionId = 164
Class = 0, Similarity = 0.029273, transactionId = 4
Class = 0, Similarity = 0.052335, transactionId = 89
Class = 0, Similarity = 0.069616, transactionId = 20
Class = 0, Similarity = 0.075523, transactionId = 8

For the transaction id = 35730, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.007043, transactionId = 1
Class = 0, Similarity = 0.009934, transactionId = 0
Class = 0, Similarity = 0.012576, transactionId = 2
Class = 0, Similarity = 0.018024, transactionId = 3
Class = 0, Similarity = 0.035584, transactionId = 51
Class = 0, Similarity = 0.036829, transactionId = 164
Class = 0, Similarity = 0.038447, transactionId = 4
Class = 0, Similarity = 0.061515, transactionId = 89

Class = 0, Similarity = 0.078783, transactionId = 20

Class = 0, Similarity = 0.084676, transactionId = 8

For the transaction id = 24338, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000386, transactionId = 1

Class = 0, Similarity = 0.000470, transactionId = 0

Class = 0, Similarity = 0.003111, transactionId = 2

Class = 0, Similarity = 0.008561, transactionId = 3

Class = 0, Similarity = 0.026120, transactionId = 51

Class = 0, Similarity = 0.027365, transactionId = 164

Class = 0, Similarity = 0.028994, transactionId = 4

Class = 0, Similarity = 0.052062, transactionId = 89

Class = 0, Similarity = 0.069344, transactionId = 20

Class = 0, Similarity = 0.075253, transactionId = 8

For the transaction id = 44942, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000306, transactionId = 1

Class = 0, Similarity = 0.000412, transactionId = 0

Class = 0, Similarity = 0.003052, transactionId = 2

Class = 0, Similarity = 0.008503, transactionId = 3

Class = 0, Similarity = 0.026062, transactionId = 51

Class = 0, Similarity = 0.027308, transactionId = 164

Class = 0, Similarity = 0.028938, transactionId = 4
Class = 0, Similarity = 0.052004, transactionId = 89
Class = 0, Similarity = 0.069285, transactionId = 20
Class = 0, Similarity = 0.075195, transactionId = 8

For the transaction id = 80953, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000311, transactionId = 1
Class = 0, Similarity = 0.000429, transactionId = 0
Class = 0, Similarity = 0.003069, transactionId = 2
Class = 0, Similarity = 0.008520, transactionId = 3
Class = 0, Similarity = 0.026079, transactionId = 51
Class = 0, Similarity = 0.027325, transactionId = 164
Class = 0, Similarity = 0.028955, transactionId = 4
Class = 0, Similarity = 0.052021, transactionId = 89
Class = 0, Similarity = 0.069303, transactionId = 20
Class = 0, Similarity = 0.075211, transactionId = 8

For the transaction id = 212975, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000598, transactionId = 1
Class = 0, Similarity = 0.000849, transactionId = 0
Class = 0, Similarity = 0.003489, transactionId = 2
Class = 0, Similarity = 0.008941, transactionId = 3

Class = 0, Similarity = 0.026499, transactionId = 51
Class = 0, Similarity = 0.027745, transactionId = 164
Class = 0, Similarity = 0.029374, transactionId = 4
Class = 0, Similarity = 0.052441, transactionId = 89
Class = 0, Similarity = 0.069722, transactionId = 20
Class = 0, Similarity = 0.075631, transactionId = 8

For the transaction id = 209862, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000002, transactionId = 1
Class = 0, Similarity = 0.000007, transactionId = 0
Class = 0, Similarity = 0.002648, transactionId = 2
Class = 0, Similarity = 0.008099, transactionId = 3
Class = 0, Similarity = 0.025658, transactionId = 51
Class = 0, Similarity = 0.026904, transactionId = 164
Class = 0, Similarity = 0.028534, transactionId = 4
Class = 0, Similarity = 0.068882, transactionId = 20
Class = 0, Similarity = 0.074792, transactionId = 8
Class = 0, Similarity = 0.081980, transactionId = 12

For the transaction id = 91821, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000014, transactionId = 0
Class = 0, Similarity = 0.000039, transactionId = 1

Class = 0, Similarity = 0.002654, transactionId = 2
Class = 0, Similarity = 0.008106, transactionId = 3
Class = 0, Similarity = 0.025665, transactionId = 51
Class = 0, Similarity = 0.026911, transactionId = 164
Class = 0, Similarity = 0.028541, transactionId = 4
Class = 0, Similarity = 0.051607, transactionId = 89
Class = 0, Similarity = 0.068889, transactionId = 20
Class = 0, Similarity = 0.074798, transactionId = 8

For the transaction id = 208257, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000514, transactionId = 1
Class = 0, Similarity = 0.000737, transactionId = 0
Class = 0, Similarity = 0.003378, transactionId = 2
Class = 0, Similarity = 0.008829, transactionId = 3
Class = 0, Similarity = 0.026388, transactionId = 51
Class = 0, Similarity = 0.027633, transactionId = 164
Class = 0, Similarity = 0.029263, transactionId = 4
Class = 0, Similarity = 0.052329, transactionId = 89
Class = 0, Similarity = 0.069610, transactionId = 20
Class = 0, Similarity = 0.075519, transactionId = 8

For the transaction id = 185213, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000163, transactionId = 1
Class = 0, Similarity = 0.000229, transactionId = 0
Class = 0, Similarity = 0.002869, transactionId = 2
Class = 0, Similarity = 0.008320, transactionId = 3
Class = 0, Similarity = 0.025880, transactionId = 51
Class = 0, Similarity = 0.027126, transactionId = 164
Class = 0, Similarity = 0.028755, transactionId = 4
Class = 0, Similarity = 0.051822, transactionId = 89
Class = 0, Similarity = 0.069104, transactionId = 20
Class = 0, Similarity = 0.075013, transactionId = 8

For the transaction id = 265204, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000477, transactionId = 1
Class = 0, Similarity = 0.000662, transactionId = 0
Class = 0, Similarity = 0.003303, transactionId = 2
Class = 0, Similarity = 0.008754, transactionId = 3
Class = 0, Similarity = 0.026313, transactionId = 51
Class = 0, Similarity = 0.027559, transactionId = 164
Class = 0, Similarity = 0.029188, transactionId = 4
Class = 0, Similarity = 0.052255, transactionId = 89
Class = 0, Similarity = 0.069536, transactionId = 20
Class = 0, Similarity = 0.075445, transactionId = 8

For the transaction id = 188412, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000208, transactionId = 1
Class = 0, Similarity = 0.000287, transactionId = 0
Class = 0, Similarity = 0.002927, transactionId = 2
Class = 0, Similarity = 0.008379, transactionId = 3
Class = 0, Similarity = 0.025938, transactionId = 51
Class = 0, Similarity = 0.027183, transactionId = 164
Class = 0, Similarity = 0.028812, transactionId = 4
Class = 0, Similarity = 0.051880, transactionId = 89
Class = 0, Similarity = 0.069162, transactionId = 20
Class = 0, Similarity = 0.075071, transactionId = 8

For the transaction id = 11648, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000159, transactionId = 1
Class = 0, Similarity = 0.000250, transactionId = 0
Class = 0, Similarity = 0.002891, transactionId = 2
Class = 0, Similarity = 0.008340, transactionId = 3
Class = 0, Similarity = 0.025902, transactionId = 51
Class = 0, Similarity = 0.027147, transactionId = 164
Class = 0, Similarity = 0.028776, transactionId = 4
Class = 0, Similarity = 0.051844, transactionId = 89
Class = 0, Similarity = 0.069125, transactionId = 20

Class = 0, Similarity = 0.075031, transactionId = 8

For the transaction id = 252178, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000024, transactionId = 1

Class = 0, Similarity = 0.000046, transactionId = 0

Class = 0, Similarity = 0.002687, transactionId = 2

Class = 0, Similarity = 0.008138, transactionId = 3

Class = 0, Similarity = 0.025697, transactionId = 51

Class = 0, Similarity = 0.026943, transactionId = 164

Class = 0, Similarity = 0.028574, transactionId = 4

Class = 0, Similarity = 0.051639, transactionId = 89

Class = 0, Similarity = 0.068921, transactionId = 20

Class = 0, Similarity = 0.074831, transactionId = 8

For the transaction id = 162203, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000249, transactionId = 1

Class = 0, Similarity = 0.000348, transactionId = 0

Class = 0, Similarity = 0.002989, transactionId = 2

Class = 0, Similarity = 0.008440, transactionId = 3

Class = 0, Similarity = 0.025999, transactionId = 51

Class = 0, Similarity = 0.027245, transactionId = 164

Class = 0, Similarity = 0.028873, transactionId = 4

Class = 0, Similarity = 0.051941, transactionId = 89

Class = 0, Similarity = 0.069223, transactionId = 20

Class = 0, Similarity = 0.075131, transactionId = 8

For the transaction id = 221033, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000046, transactionId = 1

Class = 0, Similarity = 0.000070, transactionId = 0

Class = 0, Similarity = 0.002711, transactionId = 2

Class = 0, Similarity = 0.008162, transactionId = 3

Class = 0, Similarity = 0.025721, transactionId = 51

Class = 0, Similarity = 0.026967, transactionId = 164

Class = 0, Similarity = 0.028598, transactionId = 4

Class = 0, Similarity = 0.051663, transactionId = 89

Class = 0, Similarity = 0.068945, transactionId = 20

Class = 0, Similarity = 0.074855, transactionId = 8

For the transaction id = 147106, and Class = 0

Similar transactions are :

Class = 0, Similarity = 0.000058, transactionId = 1

Class = 0, Similarity = 0.000101, transactionId = 0

Class = 0, Similarity = 0.002742, transactionId = 2

Class = 0, Similarity = 0.008194, transactionId = 3

Class = 0, Similarity = 0.025753, transactionId = 51

Class = 0, Similarity = 0.026998, transactionId = 164

Class = 0, Similarity = 0.028629, transactionId = 4

Class = 0, Similarity = 0.051695, transactionId = 89

Class = 0, Similarity = 0.068976, transactionId = 20

Class = 0, Similarity = 0.074887, transactionId = 8
