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1 # -*- coding: utf-8 -*-
2 # =====
3 # Projeto de Conclusão de Curso
4 # Autor: Jéssica Barbosa de Souza
5 # Descrição : Gerenciamento de todos os métodos aplicados
  . Contem todas as funções aplicadas.
6 # =====
7
8 import pandas as pd
9 from pandas import DataFrame
10 import numpy as np
11 import matplotlib.pyplot as plt
12
13 from tslearn.preprocessing import
  TimeSeriesScalerMeanVariance
14 from tslearn.piecewise import
  PiecewiseAggregateApproximation
15 from sklearn.decomposition import PCA
16
17 from sklearn.model_selection import train_test_split
18 from sklearn.metrics import fbeta_score, accuracy_score
19 from sklearn.metrics import silhouette_score
20
21 from sklearn.svm import SVC
22 from sklearn import svm
23
24 def ApplyPaa(n_paa_segments, seq, df):
25
26     listaFinal = []
27     print("segmentos de paa: {}".format(n_paa_segments))
28     paa = PiecewiseAggregateApproximation(n_paa_segments)
29     scaler = TimeSeriesScalerMeanVariance()
30     dadosPaa = pd.DataFrame(seq)
31     for i in range(0, len(df)):
32         dataset = scaler.fit_transform(df[i])
33         paa_dataset_inv = paa.inverse_transform(paa.
  fit_transform(dataset))
34         dadosPaa[i] = paa_dataset_inv[0]
35     listaFinal.append(dadosPaa)
36     dadosPaa = dadosPaa.T
37
38     plt.subplot(211)
39     plt.plot(dadosPaa)
40     plt.title('Com PAA Sallen Key')
41

```