k-nearest neighbor

# example code

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| import numpy as np  import pandas as pd  from sklearn.neighbors import KNeighborsClassifier  from sklearn.datasets import load\_breast\_cancer  from sklearn.model\_selection import train\_test\_split  import matplotlib.pyplot as plt  # 사이킷런에서 제공하는 심장병 데이터 불러오기  breast\_cancer = load\_breast\_cancer()  # 데이터 키 확인  breast\_cancer.keys()  # 데이터 분류  Xd\_train, Xd\_test, yd\_train, yd\_test = train\_test\_split(breast\_cancer['data'],breast\_cancer['target'],  test\_size=0.3,random\_state=40)  # 리스트 형태로 1~11까지의 train, test 정확도 그래프  train\_acc, test\_acc = [],[]  for i in range(1,12):      clf3 = KNeighborsClassifier(n\_neighbors=i)      clf3.fit(Xd\_train, yd\_train)      predict\_label = clf3.predict(Xd\_train)      train\_acc.append(clf3.score(Xd\_train, yd\_train))      test\_acc.append(clf3.score(Xd\_test, yd\_test))    plt.plot(range(1,12), train\_acc, label="train")  plt.plot(range(1,12), test\_acc, label="test")  plt.show() |

# testing result

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