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In [32]: #pip install kafka-python
from kafka import KafkaProducer
import json
import pandas as pd
import random
import numpy as np
import time

In [33]: pizza_center_loc=np.array([20,30])

move_li=['+', '-']
n=100

dfepd.read_csv("C:\Users\brijju\Desktop\Wtech\Assignment\Data\pizza_customers.csv", dtype=str)
producer=KafkaProducer(bootstrap_servers=('localhost:9092'), api_version=(0,10,1))

def dist(p1,p2):
    squared_dist = np.sum((p1-p2)**2, axis=0)
    dist = np.sqrt(squared_dist)
    return dist

In [34]: def person_loc_generator(a):
    initial_loc=np.array([0,0])
    prev_loc=np.array([1,1])
    status_n=0
    status_f=0
    for i in range(n):
        val=random.randint(1,4)
        prev_loc=np.ndarray.copy(initial_loc)
        move_x=move_li[random.randint(0,1)]
        move_y=move_li[random.randint(0,1)]
        print(move_x,move_y)
        if move_x=="+" and move_y=="-":
            initial_loc[0]=initial_loc[0]+val
            initial_loc[1]=initial_loc[1]-val
        elif move_x=="+" and move_y=="+":
            initial_loc[0]=initial_loc[0]+val
            initial_loc[1]=initial_loc[1]+val
        elif move_x=="-" and move_y=="+":
            initial_loc[0]=initial_loc[0]-val
            initial_loc[1]=initial_loc[1]+val
        elif move_x=="-" and move_y=="-":
            initial_loc[0]=initial_loc[0]-val
            initial_loc[1]=initial_loc[1]-val
        #print(prev_loc,initial_loc)
        prev_loc_dist=dist(prev_loc,pizza_center_loc)
        new_loc_dist=dist(initial_loc,pizza_center_loc)
        print(prev_loc_dist,new_loc_dist)
        if prev_loc_dist<new_loc_dist and new_loc_dist<50:
            status_n+=1
            if status_n<2:
                print("offer can be generatedas person is coming near ")
                bw=('id':str(a),'dir':'N')
                producer.send("test-topic",json.dumps(b).encode('utf-8'))

            if prev_loc_dist<new_loc_dist and new_loc_dist>50:
                status_f=status_f+1
                if status_f<4 and status_n>1:
                    bw=('id':str(a),'dir':'P')
                    producer.send("test-topic",json.dumps(b).encode('utf-8'))

                print("bigger offer can be generated as person is going away")
            time.sleep(0.5)
            if status_n>1 and status_n>1:
                break

In [35]: #below code will generate offer if person will come near pizza store and if its going away from pizza

In [36]: for i in range(10):
    a=df.at[random.randint(0,200),"CustomerID"]
    person_loc_generator(a)
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