INSTITUTO TECNOLÓGICO SUPERIOR DE GUASAVE

NOMBRE DEL CURSO

FUNDAMENTOS DE PROGRAMACIÓN CON PYTHON

CASO 1. INTRODUCCIÓN A PYTHON

PRESENTA

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Introducción

LifeStore es una tienda virtual que maneja una amplia gama de artículos, recientemente, la Gerencia de ventas, se percató que la empresa tiene una importante acumulación de inventario. Asimismo, se ha identificado una reducción en las búsquedas de un grupo importante de productos, lo que ha redundado en una disminución sustancial de sus ventas del último trimestre.

Derivado de la situación, la Gerencia de Ventas te solicita que realices un análisis de la rotación de productos identificando los siguientes elementos:

1) Productos más vendidos y productos rezagados a partir del análisis de las categorías con menores ventas y categorías con menores búsquedas.
2) Productos por reseña en el servicio a partir del análisis de categorías con mayores ventas y categorías con mayores búsquedas.
3) Sugerir una estrategia de productos a retirar del mercado, así como sugerencia de cómo reducir la acumulación de inventario considerando los datos de ingresos y ventas mensuales.

Definición del código

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```

#CÓDIGO

#Pedir Usuario y contraseña

acceso = False

```python
while acceso == False:
  usuario=input("Escribe tu usuario:")
  contraseña=input("Escribe tu contraseña:")

  if usuario == "emtech" and contraseña == "caso1":
    print("Datos correctos")
    acceso = True
  else:
    print("Datos incorrectos")
    acceso = False

print("Accesaste")
```

#Obtener los 5 productos con más ventas

```python
lista_ventas=[0]*97
for x in range(len(lifestore_sales)):

    for y in range (len(lifestore_products)):

        if lifestore_sales[x][1]==lifestore_products[y][0]:
            lista_ventas[y]=lista_ventas[y]+1

lista_ventas_max_5=lista_ventas
lista_ventas_min_5=lista_ventas
max_5_vent=[]
min_5_vent=[]
for r in range(5):
    d=max(lista_ventas_max_5)
```

```python
        max_5_vent.append([lista_ventas_max_5.index(d)+1,d])
        lista_ventas_max_5.pop(lista_ventas_max_5.index(d))
print("Los 5 productos con más ventas")
print(max_5_vent)
```

#Obtener los 5 productos con menores ventas

```python
for t in range(5):
    k=min(lista_ventas_min_5)

    min_5_vent.append([lista_ventas_min_5.index(k)+1,k])
    lista_ventas_min_5.pop(lista_ventas_min_5.index(k))
print("Los 5 productos con menores ventas")
print(min_5_vent)
```

#Obtener los 10 productos con más búsquedas

```python
lista_busquedas=[0]*97
for x in range(len(lifestore_searches)):
    #print("soy x:",x)
    #print(lifestore_sales[x][1])
    for y in range (len(lifestore_products)):
        #print("soy y:", y)
        #print(lifestore_products[y][0])
        if lifestore_searches[x][1]==lifestore_products[y][0]:
            lista_busquedas[y]=lista_busquedas[y]+1
#print(listabusquedas)
lista_busquedas_max_10=lista_busquedas
lista_busquedas_min_10=lista_busquedas
```

```python
max_10_bus=[]
min_10_bus=[]
for q in range(10):
    p=max(lista_busquedas_max_10)
    max_10_bus.append([lista_busquedas_max_10.index(p)+1,p])
    lista_busquedas_max_10.pop(lista_busquedas_max_10.index(p))

print("Los 10 productos con más búsquedas")
print(max_10_bus)
for e in range(10):
    b=min(lista_busquedas_min_10)
    min_10_bus.append([lista_busquedas_min_10.index(b)+1,b])
    lista_busquedas_min_10.pop(lista_busquedas_min_10.index(b))
```

#Obtener los 10 productos con menos búsquedas

```python
print("Los 10 productos con menos búsquedas")
print(min_10_bus)
lre=[0]*97
for x in range(len(lifestore_sales)):
    #print("soy x:",x)
    #print(lifestore_sales[x][1])
    for y in range (len(lifestore_products)):
        #print("soy y:", y)
        #print(lifestore_products[y][0])
        if lifestore_sales[x][1]==lifestore_products[y][0]:
            lre[y]=lre[y]+lifestore_sales[x][2]
```

Solución al problema

Estrategia.

1-Productos a retirar del mercado:

[7, 'Procesador Intel Core i7-9700K, S-1151, 3.60GHz, 8-Core, 12MB Smart Cache (9na. Generación Coffee Lake)', 8559, 'procesadores', 114],

[11, 'Tarjeta de Video ASUS AMD Radeon RX 570, 4GB 256-bit GDDR5, PCI Express 3.0', 7399, 'tarjetas de video', 2],

[13, 'Tarjeta de Video Asus NVIDIA GeForce GTX 1050 Ti Phoenix, 4GB 128-bit GDDR5, PCI Express 3.0', 3989, 'tarjetas de video', 1],

2-Sugerencia de como reducir la acumulación de inventario:

Considerar que los productos con menos ventas son los que menos probabilidad tienen de ser comprados, entonces, se propone que los productos menos buscados sean retirados de inventario. En el caso de que estos productos sean comprados, sería una opción tenerlos en un almacén lejano (más cerca de la planta de producción) con el costo de hacer esperar un poco al cliente. También, sería una opción notificar al momento de hacer la compra, de que el producto seleccionado podría demorarse en la entrega.

Los productos a retirar serían:

[10, 'MSI GeForce 210, 1GB GDDR3, DVI, VGA, HDCP, PCI Express 2.0', 889, 'tarjetas de video', 13],

   [11, 'Tarjeta de Video ASUS AMD Radeon RX 570, 4GB 256-bit GDDR5, PCI Express 3.0', 7399, 'tarjetas de video', 2],

[13, 'Tarjeta de Video Asus NVIDIA GeForce GTX 1050 Ti Phoenix, 4GB 128-bit GDDR5, PCI Express 3.0', 3989, 'tarjetas de video', 1],

[15, 'Tarjeta de Video EVGA NVIDIA GeForce GTX 1660 Ti SC Ultra Gaming, 6GB 192-bit GDDR6, PCI 3.0', 8439, 'tarjetas de video', 15],

[19, 'Tarjeta de Video Gigabyte NVIDIA GeForce GTX 1650 OC Low Profile, 4GB 128-bit GDDR5, PCI Express 3.0 x16', 4509, 'tarjetas de video', 8],

[20, 'Tarjeta de Video Gigabyte NVIDIA GeForce RTX 2060 SUPER WINDFORCE OC, 8 GB 256 bit GDDR6, PCI Express x16 3.0', 11509, 'tarjetas de video', 10],

Conclusión

Python, es una herramienta que es útil para analizar los datos. En ella se tienen a la mano herramientas muy características de los lenguajes de programación. Al contar con muchos datos, es posible utilizar Python para determinar ciertos indicadores útiles para las empresas, escuelas, instituciones y cualquier organización que requiere tomar decisiones acertadas. Con este lenguaje de programación, podemos soluciones problemas de análisis de datos, lo que con otras herramientas sería costoso y con no tantas comunidades de personas alrededor del mundo con ánimo de apoyar el emprendimiento.

Planeo seguir utilizar Python, deseo aprender más y utilizar adecuadamente esta herramienta que, como ingeniero me ayudará a realizar mejor y en menos tiempo mi trabajo.

Repositorio

https://github.com/ro2mel33/Fundamentos-Python.git