***#Prepare the data***

import pandas as pd

file\_path=r'C:\Users\.....\shopping\_trends.csv'

data=pd.read\_csv(file\_path)

print(data.head())

print(data.info())

print(data.isnull().sum())

import matplotlib.pyplot as plt

import seaborn as sns

***#Age distribution histogram***

plt.figure(figsize=(10,6))

plt.hist(data['Age'],bins=70,alpha=0.7,color='blue')

plt.xlabel('age')

plt.ylabel('age\_count')

plt.title('age\_distribution')

plt.savefig('aa.png')

plt.show()

***#Gender distribution pie chart***

gender\_type=data.value\_counts('Gender')

#print(gender\_type)

plt.figure(figsize=(10,6))

plt.pie(gender\_type,labels=gender\_type.index,autopct='%.1f%%',startangle=90)

plt.title('Gender\_distribution')

plt.axis('equal')

plt.savefig('ab.png')

plt.show()

***#Purchase product line chart***

Item\_Purchased=data.value\_counts('Item Purchased')

items=Item\_Purchased.index

quantities=Item\_Purchased.values

plt.plot(items,quantities,marker='o',linestyle='-',color='blue')

plt.title('items\_quantitile\_line')

plt.xlabel('items')

plt.ylabel('quantities')

plt.grid(axis='y',linestyle='--',alpha=0.7)

plt.xticks(rotation=90)

plt.show()

plt.savefig('ac.png')

***#Product category bar chart***

Category\_type=data.value\_counts('Category')

type=Category\_type.index

quantities=Category\_type.values

plt.bar(type,quantities)

plt.title('Category\_distribution')

plt.xlabel('type')

plt.ylabel('quantities')

plt.savefig('ad.png')

plt.show()

***#Color distribution pie chart***

color\_type=data.value\_counts('Color')

plt.figure(figsize=(10,6))

plt.pie(color\_type,labels=color\_type.index,autopct='%.2f%%',startangle=90)

plt.title('color\_type')

plt.axis('equal')

plt.savefig('ae.png')

plt.show()

***#Size distribution donut chart***

Size\_type=data.value\_counts('Size')

plt.figure(figsize=(10,6))

plt.pie(Size\_type,labels=Size\_type.index,autopct='%.1f%%',startangle=90,wedgeprops={'width':0.4})

plt.title('Size\_type')

plt.axis('equal')

plt.savefig('af.png')

plt.show()

***#Geographic distribution line chart***

Location\_type=data.value\_counts('Location')

type=Location\_type.index

quantities=Location\_type.values

plt.plot(type,quantities,marker='o',linestyle='-',color='blue')

plt.title('Location\_type\_line')

plt.xlabel('type')

plt.ylabel('quantities')

plt.grid(axis='y',linestyle='--',alpha=0.7)

plt.xticks(rotation=90)

plt.savefig('ag.png')

plt.show()

***#Seasonal distribution bar chart***

Season\_type=data.value\_counts('Season')

type=Season\_type.index

quantities=Season\_type.values

plt.bar(type,quantities)

plt.title('Season\_distribution')

plt.xlabel('type')

plt.ylabel('quantities')

plt.savefig('ah.png')

plt.show()

***#Evaluation distribution bar chart***

plt.figure(figsize=(10,6))

plt.hist(data['Review Rating'],bins=20,alpha=0.7,color='blue')

plt.xlabel('Review\_Rating')

plt.ylabel('count')

plt.title('Review\_Rating\_distribution')

plt.savefig('ai.png')

plt.show()