**Cust\_Purch\_FakeData**

1. **How many entries your data have? Can you tell the no. of columns in your data?**

df.info()

1. **What are the max and min ages of your customer? Can you find mean of your customer?**

print("Max. age of the customer is:", df['age'].max())

print("Min. age of the customer is:", df['age'].min())

print("Avg. age of the customer is:", df['age'].mean())

1. **What are the three most common customer's names?**

df['first'].value\_counts().head(3)

1. **Two customers have the same phone number, can you find those customers?**

df['phone'].value\_counts().head(2)

1. **How many customers have profession "Structural Engineer"?**

df[df['profession'] == "Structural Engineer"].count()

1. **How many male customers are 'Structural Engineer'?**

df[(df['profession'] == "Structural Engineer") & (df['gender'] == "Male")].count()

1. **Find out the female Structural Engineers from province Alberta (AB)?**

df[(df['profession'] == "Structural Engineer") & (df['gender'] == "Female") & (df['province'] == "AB")]

1. **What is the max, min and average spending?**

print("Max. spending:", df['price(CAD)'].max())

print("Min. spending:", df['price(CAD)'].min())

print("Avg. spending:", df['price(CAD)'].mean())

1. **Who did not spend anything? Company wants to send a deal to encourage the customer to buy stuff!**

df[df['price(CAD)']==0.0]

1. **As a loyalty reward, company wants to send thanks coupon to those who spent 100CAD or more, please find out the customers?**

df[df['price(CAD)']>=100.0]

1. **How many emails are associated with this credit card number '5020000000000230'?**

df1 = df[df['cc\_no']==5020000000000230]

df1['email']

1. **We need to send new cards to the customers well before the expire, how many cards are expiring in 2019?**

df[df['cc\_exp'].apply(lambda x: x[5:]) == '19'].count()['cc\_exp']

1. **How many people use Visa as their Credit Card Provider?**

df[df['cc\_type'] == "Visa"].count()['cc\_type']

1. **Can you find the customer who spent 100 CAD using Visa?**

df[(df['cc\_type'] == "Visa") & (df['price(CAD)'] == 100)]

1. **What are two most common professions?**

df['profession'].value\_counts().head(2)

1. **Can you tell the top 5 most popular email providers? (e.g. gmail.com, yahoo.com, etc...)**

df['email'].apply(lambda x: x[x.index('@')+1:]).value\_counts().head(5)

1. **Is there any customer who is using email with "am.edu"?**

df[df['email'].apply(lambda x: x[x.index('@')+1:]) == "am.edu"]

1. **Which day of the week, the store gets more customers?**

df['weekday'].value\_counts().head(5)