Customer Segmentation Project

Week 10

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1. Group Information

Group Name**:** M.A.S

Specialization: Data Science

Submitted to: Data Glacier canvas platform

Internship Batch: LISUM10: 30

Group Members	Three members		
Name	**Email**	**Country**	**Collage/Company**
Moath Mohammed Bin Musallam	moathmusallam@gmail.com	Saudi Arabia	University of East Anglia
Andrew Kojo Mensah-Onumah	kojoakmo@gmail.com	Ghana	Data Glacier
Shaimaa Saleh Obad Al-khawlani	s.khawlany@gmail.com	Yemen	Data Glacier

2. Problem description

Most banks around the world have variant large customer base with different income levels, ages, characteristics, values and lifestyles.

XYZ bank wants to increase the production and the satisfactions of all customers categories by roll out Christmas offers to their customers.

But Bank does not want to roll out same offer to all customers instead they want to roll out personalized offer to particular set of customers. If they manually start understanding the category of customer then this will be not efficient and also, they will not be able to uncover the hidden pattern in the data (pattern which group certain kind of customer in one category).

3. GitHub Repo link

https://github.com/kojomensahonums/Customer-segmentation-with-Data-Glacier/tree/master/Week10-EDA

4. EDA performed on the data

Deep analysis performed on the dataset, and the analysis was done as per the assumptions that was proposed by the team, the assumptions are:

- How many customers the bank have per (Country /Province / Geneder /Age /Channel used by the customer/ Customer type)?
- What is the Total Gross income of the household per (Country/ Province/ Residence index/ Foreigner index/ Deceased index/ Customer type)?
- What is the most used products in general?
- What is the most channel used by the customer?
- What bank products are used by people of different age brackets?
- What are the popular products per city?
- What bank products are used by people of different income brackets?
- What are the least and most used products?
- What are the popular products by gender?

According to the team started to understand data, knowing that the dataset was cleaned before and prepared in week 9.

The process of EDA analysis was divided as the following:

1. **Customer Analysis:** in this section, count the number of the customer in the bank as the following:
   - The whole number of the bank's customers.
   - The number of the customers by country.
   - The number of the customers by city.
   - The number of the customers by gender.
   - The number of the customer by age.
   - The number of the customer by Channel.
   - The number of the customer by Residence and Foreign index.
   - The number of the customer by Customer Type.

2. **Product Analysis:** deep analysis was performed, it is the most important section because we need to know the most used products of the bank and according to this we determined what products that we must has offers. The process performed as the following:

   - Total Number of all used products.
   - Total Number of used products by Gender.
   - Total Number of used products by Gander and Activity Index.
   - Total Number of used products City.
   - Total Number of used products Age.

3. **Customer's Income Analysis:** in this section we studied the highest income and the lowest income as whole and by City, Age and etc.

Finally, the result of the above analysis was stated as the following:

1. Most of the customers and products used are in Spain and Madrid has the highest customer numbers and product used.
2. Females are the most customer number in the bank in term of genders.
3. Regarding to the ages, all observations mentions that customer in twenties are most bank's customers.
4. The most account/product used is the Current Account.
5. The most channel used by customer is KAT channel.

5. Final Recommendations

As per the insights results, we provide the recommendation according to different aspects:

1. Age: According to the age insights it is highly recommended to focus on ages that is younger than and older than twenties ages.
2. Gander: Males has lower product usage than Females, so we recommend to give special offers for Males.
3. Country: We can say that Spain is the only Country which uses bank's products, the bank has to focus on other countries.

4. City: As per the insights most of the customers are in Madrid then Barcelona, the other Cities are very low so special offers has to proposed to these cities to increase the customer numbers.

5. Products: the bank has to give special offers for the products rather than current account since it is the most used product.