

Data Analytics Project

An unusual approach to Insurance

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Problem Definition

- The ability to retain customers in the insurance area has been important for increasing revenue;
- The impact of COVID has made it difficult for some individuals to purchase an insurance policy, as well as maintain an existing policy;
- Therefore, competition has increased but the population share tends to decrease.

Data Collection

- A Dataset called *Data* analytics Project dataset was given and after collecting and reading this data I've observed that it has 139390 rows and 26 columns.

The columns variables that I've used for this analysis were:

NO_OF_TRXNS202005: Number of transactions within a month 05 of year 2020.

NO_OF_TRXNS202006: Number of transactions within a month 06 of year 2020.

TURNOVER202005: Total Amount of credits within a month 05 of year 2020.

TURNOVER202006: Total Amount of credits within a month 05 of year 2020.

Insur PackName: Insurance product family/group.

Product Status: Product status.

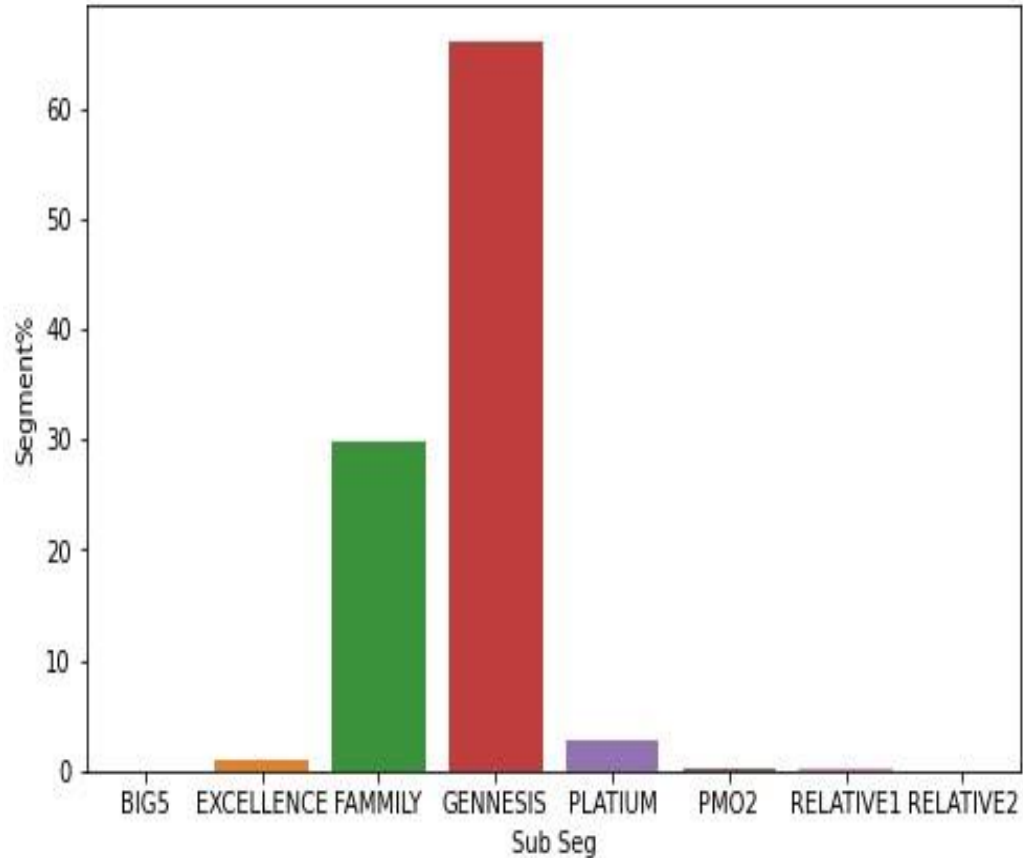
Sub Seg: Customer Segment.

Exploratory Data Analysis (EDA)

There are a some questions that need to be answered by this analysis, those questions will be helpful to understand better the data.

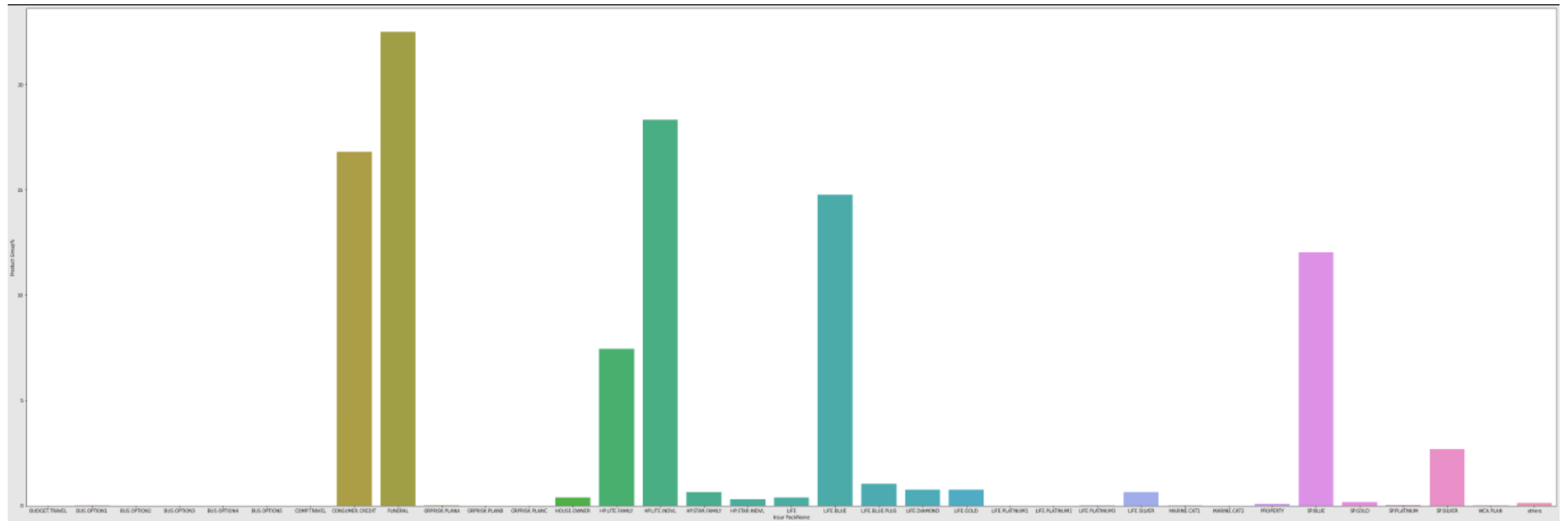
1. Which customer segment is most prevalent?
2. Which insurance group is most prevalent?
3. What is the status of product distribution?
4. Which customer segment has the most cancellations?
5. Which product group has most cancellations?

Customer Segment Chart



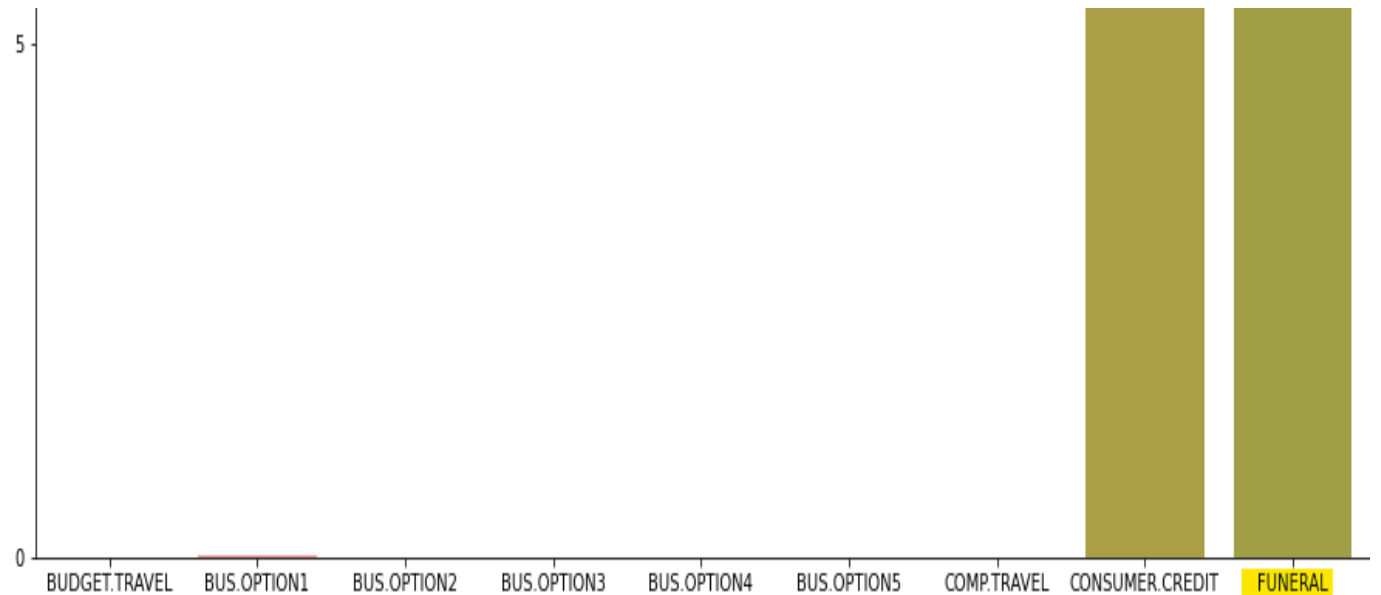
- We can see that we have eight segments in total;
- The segment with most customers is GENNESIS, followed by FAMMILY in second place and PLATIUM in third;
- RELATIVE 1 and RELATIVE 2 have an extremely low number of customers.

Insurance Group Chart



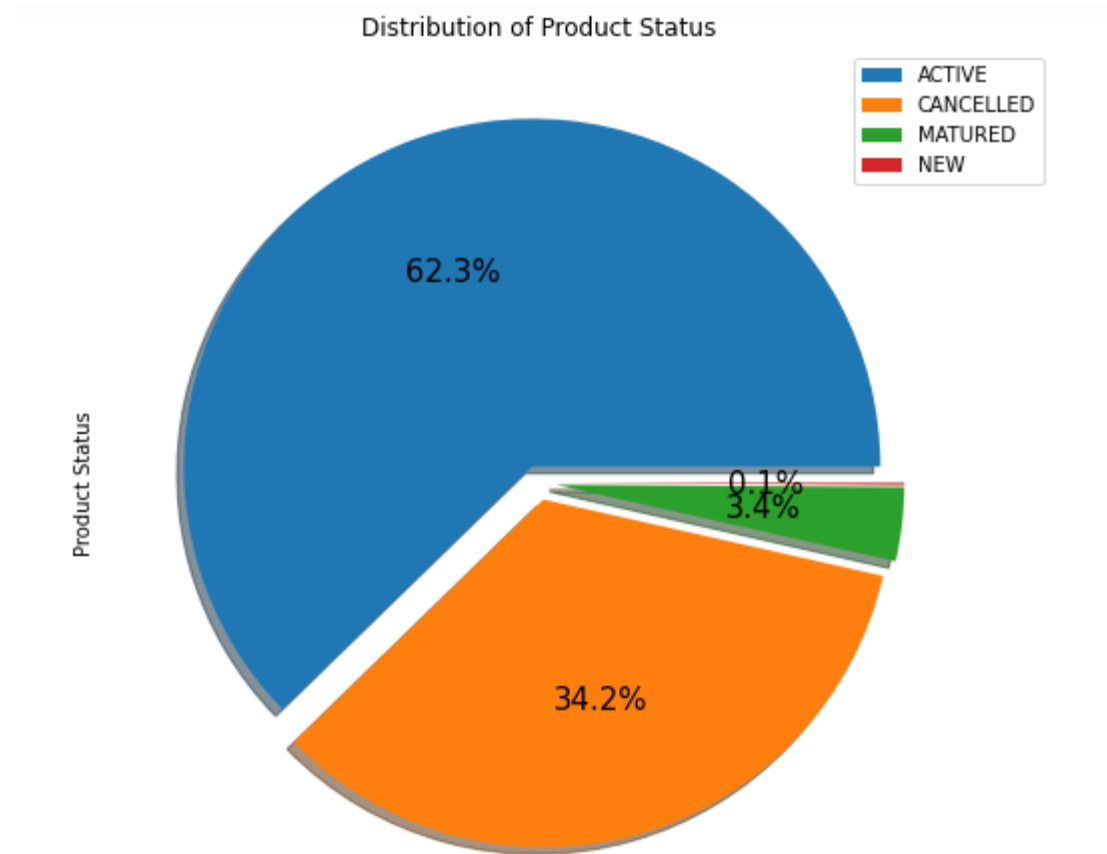
Cont.

- Expanding the previous image, it is possible to observe that the insurance group with the most users is the FUNERAL group;
- In second place we have the HP.LITE.INDVL and in third the CONSUMER.CREDICT.



Status of product distribution

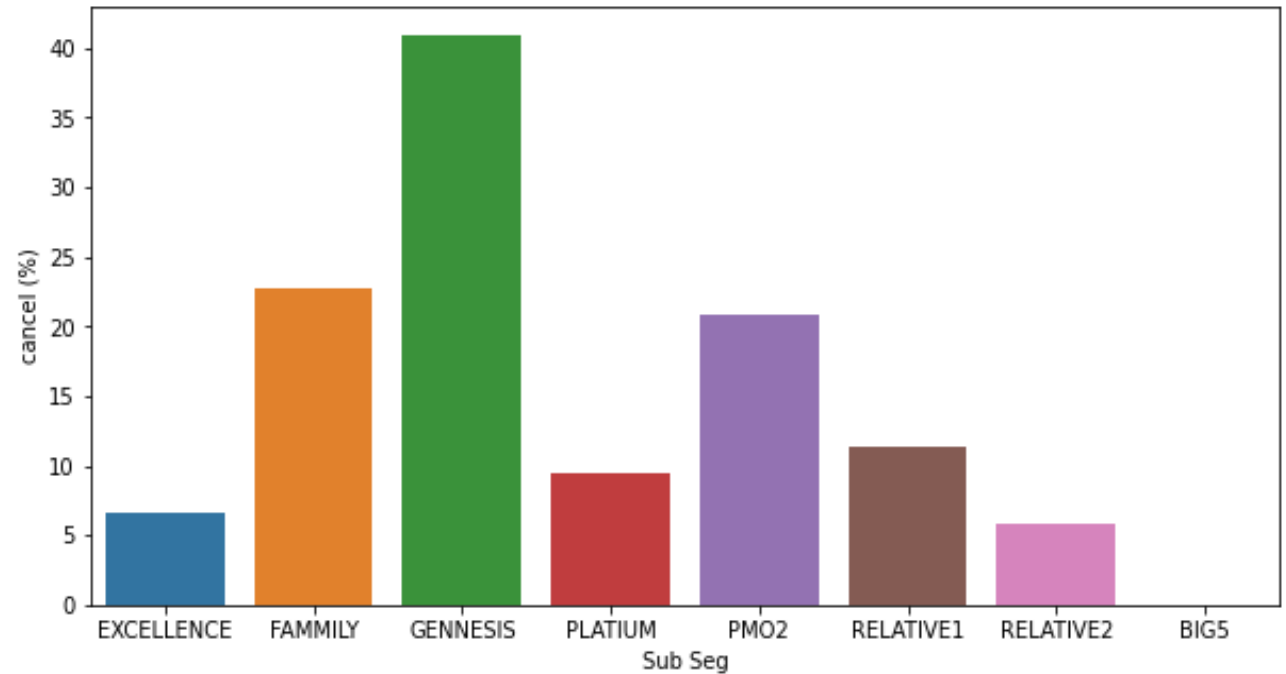
- We can notice that 62.3 % of the products are active, 34.2% was cancelled and 3.4% matured.



Cancellations By Customer Segment Chart

Based on the graph on the side and the table below, we can see that:

- The customer segment that has the most churns is GENNESIS;
- With a total of 37663 cancellations in a universe of 91947 customers in this segment;



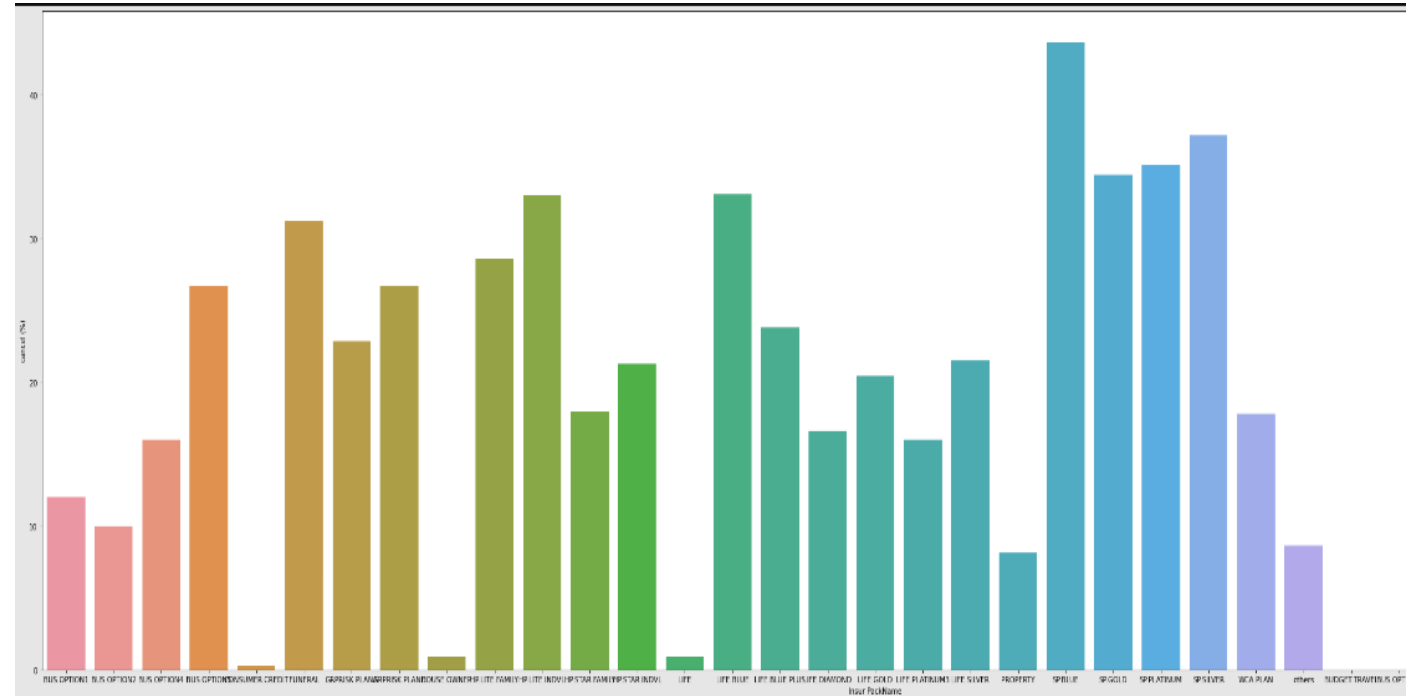
Cont.

	total cancelled per segment	total clients per segment	cancel (%)
Sub Seg			
EXCELLENCE	91.0	1362	6.68
FAMMILY	9415.0	41450	22.71
GENNESIS	37633.0	91947	40.93
PLATIUM	365.0	3871	9.43
PMO2	73.0	350	20.86
RELATIVE1	32.0	282	11.35
RELATIVE2	1.0	17	5.88
BIG5	NaN	14	NaN

Cancelations By Product Group

Based on the graph on the side and the table below, we can see that:

- The product group that has the most churns is SP.BLUE;
- With a total of 9146 cancellations in a universe of 16765 customers in this product group;



Cont.

Out[11]:

	total cancelled per product group	total clients per group	cancel (%)
Insur PackName			
BUS.OPTION1	3.0	21	12.86
BUS.OPTION2	1.0	8	11.25
BUS.OPTION4	1.0	5	18.00
BUS.OPTION5	2.0	6	30.00
CONSUMER.CREDIT	72.0	23417	0.28
FUNERAL	12229.0	31328	35.13
GRPRISK.PLANA	4.0	14	25.71
GRPRISK.PLANC	2.0	4	45.00
HOUSE.OWNER	6.0	525	1.03
HP.LITE.FAMILY	3711.0	10384	32.16
HP.LITE.INDVL	10543.0	25527	37.17
HP.STAR.FAMILY	200.0	891	20.20
HP.STAR.INDVL	110.0	414	23.91
LIFE	6.0	543	0.99
LIFE.BLUE	8506.0	20560	37.23
LIFE.BLUE.PLUS	430.0	1443	26.82
LIFE.DIAMOND	218.0	1048	18.72

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LIFE.DIAMOND	218.0	1048	18.72
LIFE.GOLD	268.0	1048	23.02
LIFE.PLATINUM3	2.0	10	18.00
LIFE.SILVER	245.0	912	24.18
PROPERTY	12.0	125	8.64
SP.BLUE	9146.0	16765	49.10
SP.GOLD	108.0	251	38.73
SP.PLATINUM	25.0	57	39.47
SP.SILVER	1737.0	3738	41.82
WCA.PLAN	7.0	28	22.50
others	18.0	167	9.70

Conclusion

- It was possible to notice that we have a cancellation rate of approximately 34% taking into account all the products offered;
- The segment with the most cancellations is GENNESIS, with an index of approximately 40%. This value is worrying because GENNESIS is the product segment with the most adherence, therefore of the 91947 customers, around 37633 canceled the insurance;
- With the facts described above, we can conclude that customers in the GENNESIS segment are more likely to cancel the product in the future;
- Looking at the results obtained, the best product is platinum, which occupies the third position in the ranking of most used segments and has a cancellation rate of 9%.
- Approximately half of all SP.BUE group product users have canceled. Making it more susceptible to churns in the future.

Thank You!