

Finance

Pig E. Bank



Project Overview



Project Title

**Client Churn Analysis for Pig E.
Bank**




Objective

Identify key factors contributing to customer churn and recommend targeted strategies to improve retention



Business Context

 Pig E. Bank seeks to reduce churn by understanding why clients leave, aiming to boost retention, growth, and customer satisfaction.



Data & Methodology



Data Sources

Pig E. Bank client dataset



Key Questions

- ✓ Which customer demographics are most likely to leave the bank?
- ✓ What behavioural patterns (e.g. inactivity, product usage) predict churn?
- ✓ How does product or service usage influence retention?



Tools & Techniques

Excel – for data cleaning, pivot tables, summary statistics, visualizations, and decision tree logic.



Data Summary: Client Loss Risk Factors

	Count of Customer_ID	Percentage of Customer
Left	204	21%
Stayed	787	79%
Grand Total	991	100%

Estimated_Salary			
	Left	Stayed	Grand Total
0 - 100000	102	401	503
100000 - 200000	102	384	486
N/A		2	2
Grand Total	204	787	991

Count of Balance			
	Left	Stayed	Grand Total
0	56	293	349
1 - 100000	25	130	155
100000 - 200000	120	364	484
200000 - Above	3		3
Grand Total	204	787	991

Count of Age			
	Left	Stayed	Grand Total
Young 18-29	10	139	149
Middle Age 30-59	173	617	790
Senior 60 and more	21	31	52
Grand Total	204	787	991

Count of Active_Membership_Status			
	Left	Stayed	Grand Total
Active	61	442	503
Inactive	143	345	488
Grand Total	204	787	991

Count of Credit_Card_Status			
	Left	Stayed	Grand Total
Has Credit Card	144	556	700
No Credit Card	60	231	291
Grand Total	204	787	991

Count of Num_of_Products			
	Left	Stayed	Grand Total
1	142	368	510
2	32	414	446
3	28	5	33
4	2		2
Grand Total	204	787	991

Count of Tenure			
	Left	Stayed	Grand Total
0	6	32	38
1	30	73	103
2	27	83	110
3	20	81	101
4	17	69	86
5	20	80	100
6	21	73	94
7	15	78	93
8	20	88	108
9	21	87	108
10	7	43	50
Grand Total	204	787	991

Descriptive Statistics

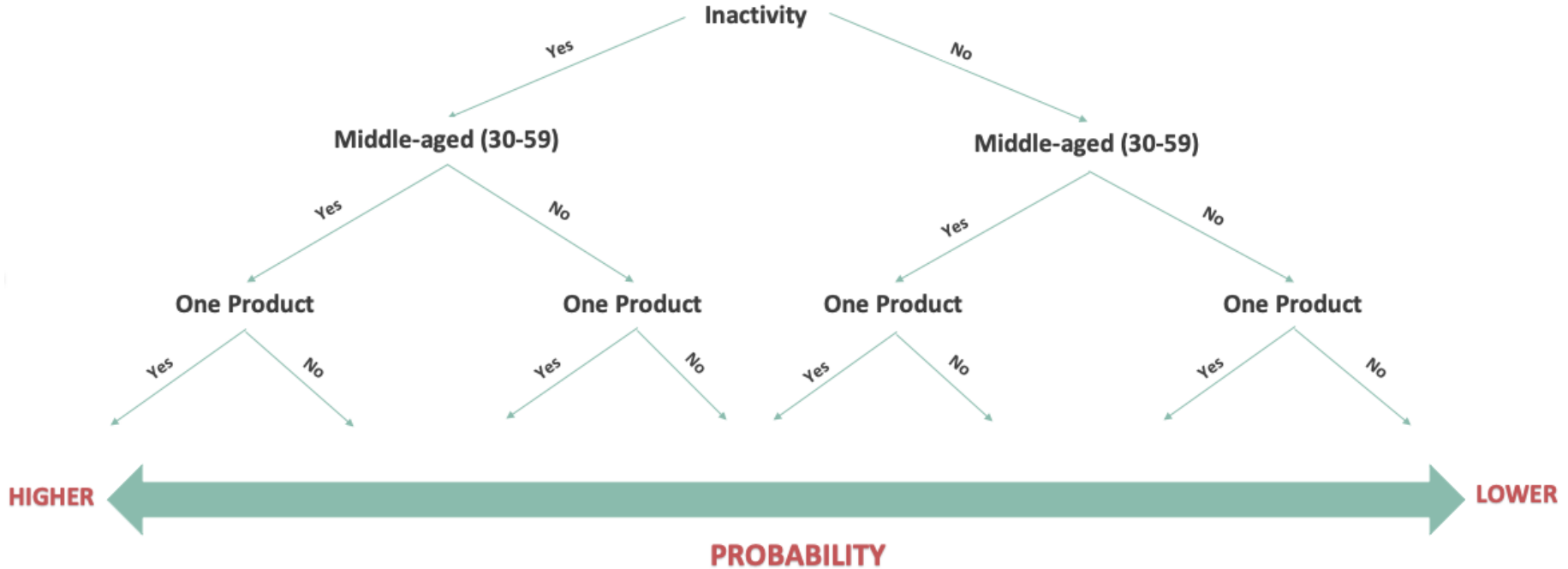
	All customer data					Customers who have closed their accounts			
	Mean	Max	Min	Mode		Mean	Max	Min	Mode
Country				France	Country				France
Gender				Male	Gender				Female
Age	39	82	18		Age	45	69	22	
Credit_Score	648	850	376		Credit_Score	635	850	376	
Tenure	5	10	0		Tenure	5	10	0	
Balance	\$78.002,0	\$213.146,0	\$0,00		Balance	\$90.239,0	\$213.146,0	\$0,00	
Num_of_Products	2	4	1		Num_of_Products	1	4	1	
Credit_Card_Status				Has Credit Card	Credit_Card_Status				Has Credit Card
Active_Membership_Status				Active	Active_Membership_Status				Inactive
Estimated_Salary	\$98.591	\$199.725	\$371		Estimated_Salary	\$97.155	\$199.725	\$417	
Account_Exit_Status				Stayed	Account_Exit_Status				Left

Analysis:

- 1.Age Group: Middle-aged customers (30-59) account for 85% of churn.
- 2.Balance & Salary: No clear link between balance or salary and churn.
- 3.Membership: Inactive customers have higher churn (70%).
- 4.Products: Fewer products lead to higher churn.
- 5.Credit Card: Customers without credit cards are more likely to leave.

	Customers Still with the Bank			
	Mean	Max	Min	Mode
Country				France
Gender				Male
Age	37	82	18	
Credit_Score	652	850	411	
Tenure	5	10	0	
Balance	\$74.807,0	\$197.041,0	\$0,00	
Num_of_Products	2	3	1	
Credit_Card_Status				Has Credit Card
Active_Membership_Status				Active
Estimated_Salary	\$98.965	\$199.662	\$371	
Account_Exit_Status				Stayed

Decision Tree





Top Factors Contributing to Client Loss:


- Middle-aged customers (30-59) make up most of the churn.
- Inactive membership is the strongest predictor of loss.
- Customers with only one product are more likely to leave.


Summary of Findings and Actionable Recommendations


Key Findings:

 Middle-aged clients (30–59) make up 85% of those who left.


 Inactive members are the most likely to churn (70% of exits).


 Single-product users have the highest risk of leaving (70% churn).


 No credit card slightly increases churn risk.


 Balance & Salary don't show a clear link to churn.

Recommendations:

 Engage Middle-Aged Clients Offer tailored solutions and personalized support.

 Encourage Active Membership Launch loyalty perks or app engagement reminders.

 Promote Multi-Product Use Introduce bundles and personalized upselling strategies.

 Incentivize Credit Card Adoption Provide signup bonuses or exclusive cardholder benefits.

