

PROJECT OVERVIEW

Pig E. Bank is a well-known global bank looking for anti-money laundering and customer retention support. The Pig E. Bank stakeholders are most interested in assessments of client risk and transaction risk, as well as reporting on metrics.



KEY OBJECTIVE

Analyze historical customer data to optimize the utilization of predictive models in reviewing customer churn and retention

LIMITATIONS

Data is from an unknown date. There isn't a lot of data to show ongoing churn and retention trends. Provided with some demographics based on country, gender, and age, including tenure, account balance, products, credit card, activity, estimated salary, and current bank status



TOOLS/SKILL

- Big Data Management
- Data Ethics
- Data Mining
- Predictive Analysis: Random Forest
- Data Visualization with Excel
- Excel Reporting

DATA SET

- Project Brief
- Client Dataset |via CareerFoundry

FINDINGS

The Top 3 factors for predicting customers leaving the bank.

Number of Products

| Entire Database | | | | Actual Customers Database | | | | Exited Customers Database | | | |
|-----------------|---|----------------|---------|---------------------------|----------------|---------|--|---------------------------|---|----------------|---------|
| Count of | | | | Count of | | | | Count of | | | |
| Row Labels | ▼ | No_Of_Products | % | Row Label | No_Of_Products | % | | Row Labels | ▼ | No_Of_Products | % |
| 1 | | 510 | 33.80% | 1 | 368 | 46.76% | | 1 | | 142 | 47.65% |
| 2 | | 446 | 59.11% | 2 | 414 | 52.60% | | 2 | | 32 | 21.48% |
| 3 | | 33 | 6.56% | 3 | 5 | 0.64% | | 3 | | 28 | 28.19% |
| 4 | | 2 | 0.53% | Grand Tot | 787 | 100.00% | | 4 | | 2 | 2.68% |
| Grand Total | | 991 | 100.00% | | | | | Grand Total | | 204 | 100.00% |

from the above analysis, Customers owning 1 product have the highest percentage of exiting the bank, but they also account for more than 33% of total customers. Out of 787 total active customers at Pig E. Bank, 46% owned 1 product, and owning only 1 product seems to be risk factors for leaving the company.

Country of Residence

| Entire Database | | | | Actual Customers Database | | | | Exited Customers Database | | | |
|------------------|---|------------------|---------|---------------------------|---|------------------|---------|---------------------------|---|------------------|---------|
| Count of Country | | | | Count of Country | | | | Count of Country | | | |
| Row Labels | ▼ | Count of Country | % | Row La | ▼ | Count of Country | % | Row Labels | ▼ | Count of Country | % |
| France | | 480 | 48.44% | France | | 403 | 51.21% | France | | 77 | 37.75% |
| Germany | | 257 | 25.93% | Germany | | 182 | 23.13% | Germany | | 75 | 36.76% |
| Spain | | 254 | 25.63% | Spain | | 202 | 25.67% | Spain | | 52 | 25.49% |
| Grand Total | | 991 | 100.00% | Grand Tot | | 787 | 100.00% | Grand Total | | 204 | 100.00% |

French customers account for almost half of Pig E. Bank's customer base. Germany has a higher exit rate when comparing total German customers vs German customers who have exited the bank. France has 480 customers and 77 (16%) have left. However, German only has 257 customers and 75 (29%) have left.

FINDINGS

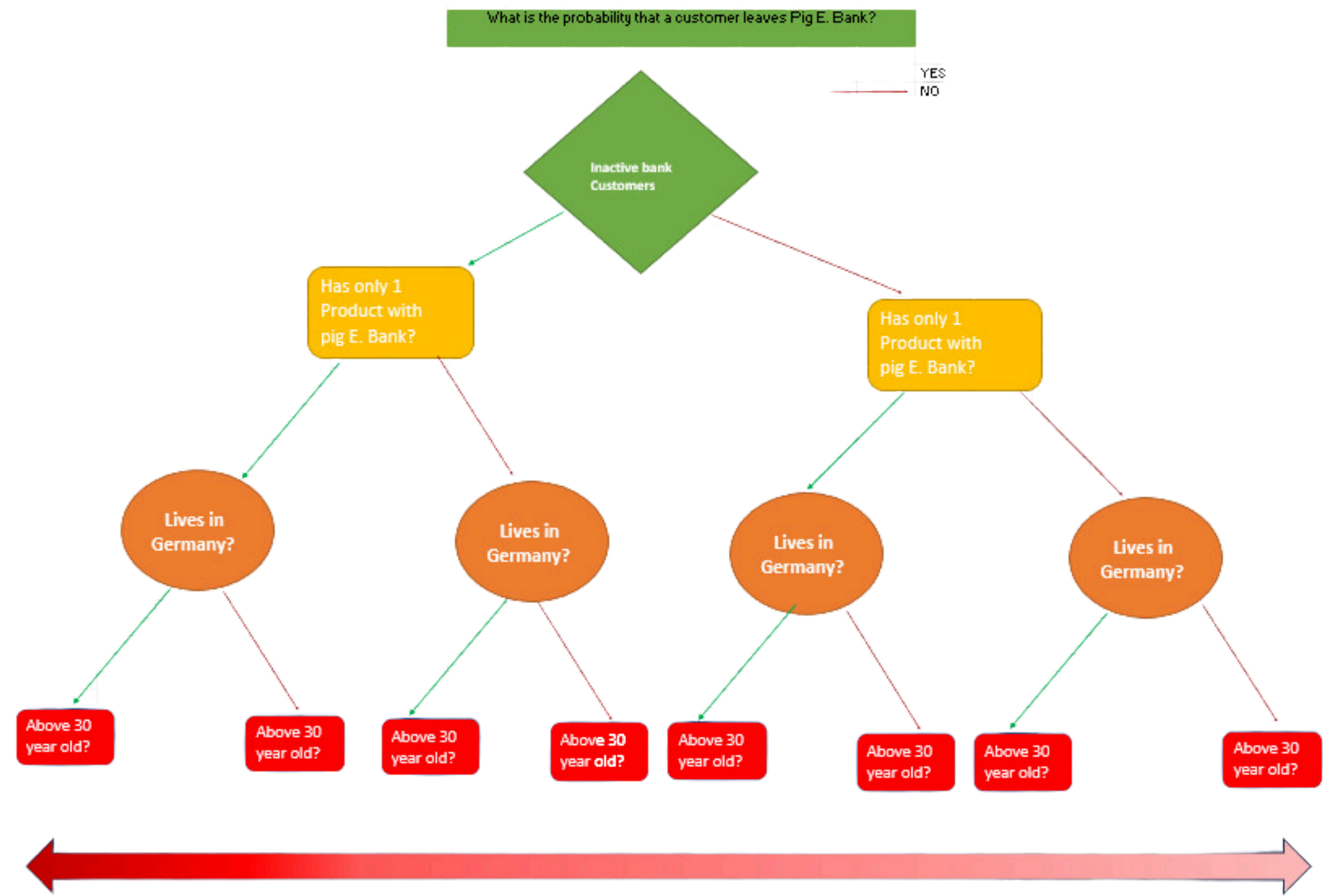
Activity Status

| Entire Database | | |
|-----------------|---------------|---------|
| Count of | | |
| Row Labels | Active_Member | % |
| 0 | 488 | 49.24% |
| 1 | 503 | 50.76% |
| Grand Total | 991 | 100.00% |

| Actual Customers Database | | |
|---------------------------|---------------|---------|
| Count of | | |
| Row Lab | Active_Member | % |
| 0 | 345 | 43.84% |
| 1 | 442 | 56.16% |
| Grand Total | 787 | 100.00% |

| Exited Customers Database | | |
|---------------------------|--------|---------|
| Count of | | |
| Row Labels | Credit | % |
| 0 | 60 | 29.41% |
| 1 | 144 | 70.59% |
| Grand Total | 204 | 100.00% |

This predictive model determines the probability of customers leaving the bank



The above ratio of inactive customers shows that 70% of customers who exited the bank were inactive customers. 29% of total exited members decided to leave the bank

CONCLUSION AND RECOMMENDATIONS

Activity Status

, encourage customer activity by expanding number of products, Inactive customers are more at risk of leaving the bank

Products & Services :

products and services provided customer with one product stand higher risk leaving bank

Research/Customer Feedback

Better understand customer banking needs through regular surveys and interviews