Naphon Santisukwongchot

Profile summary

Student

Thammasat business school

Business administration : Finance

Aug 2017 - May 2021

Present

Associate account manager

N-Squared eCommerce, Bangkok

Oct 2021 - May 2023

Seeking a career transition into data science. Excellent understanding and proficiency of platforms for effective data analysis, including Excel, Python, R, and SQL. Strong communication, organizational and analytical skills.

Technical strengths

Business Intelligence :	Looker, Power BI, Tableau
Data Analysis :	Pandas, NumPy
Data Visualization :	Matplotlib, Seaborn
Machine Learning :	Scikit-Learn
Microsoft Office :	Excel, PowerPoint, Word
Programming :	Python, R, SQL

Skills

- ◊ Attention to Detail
- ◊ Business Acumen
- ◊ Collaboration
- ◊ Critical Thinking
- ◊ Problem Solving
- ◊ IELTS 6
- ◊ Regression , Classification, Clustering

Churn Rate prediction (1)

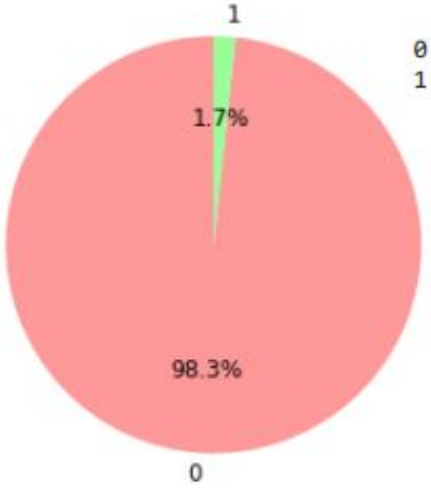
Overview

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

df = pd.read_csv('customer_dataset.csv')
df_postpaid_loyalty = df[(df['ACCT_TYPE']=='Postpaid') & (df['AOU_DAY']>1095)]
df_postpaid_loyalty.head()
```

```
print(df_fs.isnull().sum())
```

```
CURR_MAIN_PKG_FEE       0
AOU_DAY                 0
AOU_DVC                 0
DVC_GRP                 0
DVC_CLASS               0
DVC_SUPPORT             0
MOST_USED_4W_REGION     0
DTAC_RWRD_SEGMENT       0
Churn_Flag              0
REVENUE                 0
AVG3M_REVENUE           0
VC_DOM_MOU              0
VC_DOM_CNT              0
AVG3M_VC_DOM_MOU        0
AVG3M_VC_DOM_CNT        0
DATA_MB                 0
AVG3M_DATA_MB           0
CIN_CALLCNT             0
VOC_ACTIVEDAY           0
DATA_ACTIVEDAY          0
PM_PMMTHDCOMMON         0
PCT_CALL_DROP           0
dtype: int64
```



0	175494
1	3009
	178503

Company target

- ◊ Churn rate = 1.70%
- ◊ Retention rate = 80%

In **Postpaid loyalty customers (3 years)**

Data preparation

- ◊ Importing frameworks
- ◊ **Filter relevant data** points
- ◊ **Check data types** and **missing value**

Exploratory data analysis

- ◊ Create pie chart of **Churn_Flag proportion**
- ◊ (0) Loyal customer = 98.30%
- ◊ (1) Churner = 1.70%

Since the current churn rate is on target at 1.70%, it's not a major concern at this stage, but proactive measures should still be in place to prevent potential causes.

Churn Rate prediction (2)

Machine Learning Models

```
RandomForestClassifier
RandomForestClassifier(random_state=42)
```

```
y_test_pred = rf.predict(X_test)

print("Accuracy Score:\n", accuracy_score(y_test, y_test_pred))
print("Confusion Matrix:\n", confusion_matrix(y_test, y_test_pred))
print("Classification Report:\n", classification_report(y_test, y_test_pred))
```

```
Accuracy Score:
 0.9994397916024761
Confsuion Matrix:
 [[35079    20]
 [    0   602]]
Classification Report:
              precision    recall  f1-score   support

           0       1.00      1.00      1.00     35099
           1       0.97      1.00      0.98       602

    accuracy                           1.00     35701
   macro avg       0.98      1.00      0.99     35701
weighted avg       1.00      1.00      1.00     35701
```

Features selection

◊ (X) Features : **relevant features**
For **categorical features —> label encoder**
◊ (Y) Target : Churn_Flag
For (0) Loyal customer (1) Churner

Data implementation

◊ Recheck data shape
◊ Create **train test split**
◊ Use **SMOTE** (oversampling technique)

Model evaluation

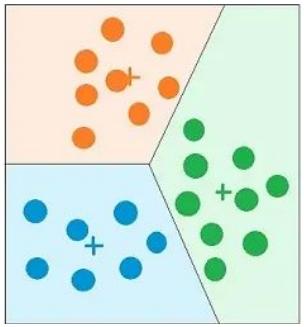
◊ Conduct model : **Random Forest**
◊ Nearly **perfect performance**

This outcome provides a strong starting point for making proactive business decisions. However, we should be mindful of potential overfitting.

Churn Rate prediction (3)

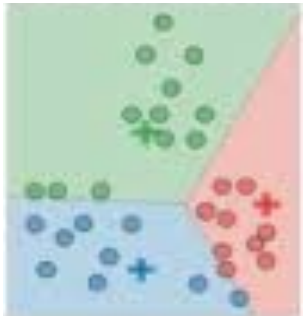
Customer Segmentation

For example only



Clustering of
(0) loyal customer

Effective offer with high accuracy



Clustering of
(1) Churner

Likely to show retention rate > 80%

◊ *Group 1 : **Price sensitivity** —> **Discount plan***
◊ *Group 2 : **High data usage** —> **Free extra data***
◊ *Group 3 : **Loyalty customer** —> **Exclusive deal***
◊ *Another promotions : bundle plan, gift, co-credit card, etc.*

Retention rate definition

◊ **Retention rate** is **customers who accept offers** when **they request to terminate services**

Customer segmentation

◊ (0) Loyal customer : **Customer segmentation**
◊ Conduct model : **K-means clustering**
◊ Find an **optimal point** : **Elbow method**

Implementation

◊ **Tailored offers** to each group of (0) Loyal customer
◊ **Implement their acceptance** in each group
◊ **Conduct** another **classification model**
◊ (0) decline, (1) accept
◊ **Offer the most effective promotion** to **potential churners** in each similar group

A/B testing is easier method to implement.

Contact

Naphon Santisukwongchot
emoney_euro@hotmail.com
(+66)89 738 3632

https://www.linkedin.com/in/naphon1999/
https://github.com/naphon1999
https://www.datacamp.com/portfolio/naphon1999
https://drive.google.com/drive/folders/1-3x_-Xmho03z5u3PA6VKZi2-nY90oixK?usp=sharing

Certifications & Developments

Data Science Bootcamp 10 :	DataRockie
Data Analyst in SQL & Python :	DataCamp
Google Advanced Data Analytics :	Google
IBM Data Science:	IBM
Machine Learning :	DeepLearning.AI