ABC Bank Ltd.

Cognext model

amol

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You can produce a wide variety of output types from executable code blocks, including plots, tabular output from data frames, and plain text output (e.g. printing the results of statistical summaries).

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## 1 EXECUTIVE SUMMARY

This document covers the model development process for **XGBoost\_2\_AutoML\_20210218\_195405** model. The model is a classification model that uses xgboost with input data consisting of 20000 observations and 70 features. The model achieves Auto of **75.84%** on validation dataset and **74.98%** on Out-of-Sample (OOS) test dataset.

## 2 MODEL PERFORMANCE SUMMARY

| Dataset | Size | Auto |
| --- | --- | --- |
| Validation | 1920 | 75.84% |
| OSS Test | 1990 | 74.98% |

## 3 DATASET

Following dataset were used for model training, tuning and OOS performance estimation:

| Dataset | Size | Features | Purpose |
| --- | --- | --- | --- |
| Train | 1690 | 70 | Model training |
| Validation | 1920 | 70 | Hyperparameter tuning |
| OSS Test | 1990 | 70 | OOS performance estimation |

## 4 EDA

Following is a summary of input data. Refer Annexure-1 for detailed EDA.

|  |
| --- |
| Image |

## 5 Methodology Overview

XGBoost XGBoost is a fast and efficient implementation of gradient boosting algorithm. Gradient boosting is a machine learning technique for regression and classification problems, which produces a prediction model in the form of an ensemble of weak prediction models, typically decision trees.

Version 1.2 is a minor upgrade.

Please contact us at info@example.com.

Quarto includes [Jupyter](https://jupyter.org) and [Knitr](https://yihui.name/knitr) computation engines.

```{python}  
alpha = 0.1  
ratio = 0.1  
import pandas as pd  
  
df = pd.read\_csv('test.csv')  
print(df.to\_string(index= False))  
#| echo: fenced  
from IPython.display import Markdown  
from tabulate import tabulate  
table = df.values.tolist()  
Markdown(tabulate(  
 table,   
 headers=df.columns  
))  
```

Dataset Size Auto  
Validation 1920 75.84%  
 OSS Test 1990 74.98%

| Dataset | Size | Auto |
| --- | --- | --- |
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