THE UNIVERSITY OF HONG KONG

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE

STAT8017 Data Mining Techniques

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Group Project

Predict Customer Churn and A More Sustainable Growth (???)

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# Project objectives

Churn means the number of clients who ended their relationship with a company in a specific period. Identifying the customers with intention to leave the company, and forming corresponding strategy to retain them are criterial in running a successful business model, especially considering the high acquisition cost of new clients. According to Harvard Business Review[[1]](#endnote-1), a new customers can be five to twenty-five times more expensive than retaining existing ones. Another research done by Frederick Reichheld[[2]](#endnote-2) also suggests that a 5% increase in customer retention will result in more than a 25% increase in profits.

In this project, we analyze ‘Churn modelling’[[3]](#endnote-3) dataset from Kaggle to identify and predict which types of customers are at higher risks to leave the bank. The bank then could take actions, such as adjusting its market strategy, to increase the retention rate of these customers. Overall, reducing churn rate should lead to a more sustainable growth of the bank.

# Data description and preprocessing

Data description/preprocessing (source of data, description of major features/variables, quality of the data, and appropriate data preparation).

# Results

(the results, and other DM techniques to be considered, describing the problem to be encountered and how they might be solved, etc.)

# Conclusion

Xx

# References

Xx

1. <https://hbr.org/2014/10/the-value-of-keeping-the-right-customers> [↑](#endnote-ref-1)
2. <http://www2.bain.com/Images/BB_Prescription_cutting_costs.pdf> [↑](#endnote-ref-2)
3. <https://www.kaggle.com/man0007/churn-modelling> [↑](#endnote-ref-3)