

# 9.7% CHURN IN SME SECTOR

## BUSINESS GOAL

- maximise chances of retaining SME customers and reduce customer churn.

## DATA GOAL

- **TEST HYPOTHESIS:** price sensitivity is to some extent correlated with churn.
- **DISCOUNTING STRATEGY:** estimate whether the 20% discount offer to customers predicted is a good measure.

## DATA SAMPLE

- **CLIENT DATA:** 14606 customers with 26 variables.
- **PRICE DATA:** 193,002 observations with 8 price variables.





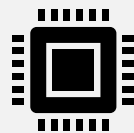
## PRICE IS SOMEWHAT RELATED TO CHURN

- Pricing features have a weak to no correlation to churn.
- Stronger correlation is observed when we trim bottom 5% of the data that mostly contain \$0 values.
- T-statistic hypothesis testing rejects the null hypothesis that there is no relation between pricing and churn.
- \$ 0 values in the pricing data are an issue and needs to be rectified.



## DISCOUNTING STRATEGY IS A GOOD STARTING POINT TO REDUCE CHURN

- **28% increase** in revenue with the 20% discounting strategy.
-  PowerCo is on the right track with the discounting strategy, but it should be targeted.
-  Assumption that customers with discount will not churn in the next year.
- Average probability to churn doesn't decrease when 20% discount applied.
- May be offering discount to non-profitable customers, thus worsening net margins.
- Offer discount to only to **high-value customers** with **high churn probability**.



## PREDICTIVE MODEL CAN PREDICT CHURN ACCURATELY

- **Price sensitivity** features are not the main drivers for a customer churning.
- **Gross margins** and **forecasted consumption** are some of the top drivers.
- Final churn prediction model has ~ **98% accuracy and precision and 82% 'Recall Rate'**.
- 'Precision' and 'Recall' metrics perform very poorly on the full dataset.
- The metrics improve drastically when we trim the top and bottom 1% observations.
- \$0 values in the pricing variables are an issue and need to be rectified.