

Pricing Strategy Machine Learning Tool

Media, Telecommunications.

Completion of the tool allowed the finance team to appraise and optimise their campaign line-up, having confidence that the forecast results are founded in actual customer level data.



Client

Our client is a provider of subscription television, internet and mobile services. They have an international reach totalling over 22 million customers, and a history of developing innovative products and entertainment content.

Purpose

The client had an existing modelling and simulation suite to describe customer behaviour in response to annual price increases. The in-house functionality using an internal risk bucket system (four) and logistic regression did not provide the granularity needed to move towards a more personalised pricing strategy. Partly, the objective of the project was to identify opportunities to increase the net yield of a price increase by allowing mitigation strategies for subsets of customers.

Key deliverables and functionality of the solution included:

- Machine Learning modelling suite of behaviour at the customer level, writing in Python and trained using cloud computing resources (Google Cloud Platform).
- Micro-segmentation of customer base using key demographic, behavioural, contractual metrics, coupled with estimated risk scores and sensitivities.
- Strategic Pricing Tool that allows for real-time simulation of the financial impact of variations on the pricing schedule, using ML models describing behaviour.
- Identification of small groups of customers for which proactive or reactive mitigation strategies would be profitable.

Approach

Forecast worked with stakeholders from the finance team and the decision science team to decide on an appropriate modelling framework and identify key deliverables. In addition to the key KPIs modelled for the Planning Tool, Forecast worked closely with the finance team to build predictive models around longer-term Net Revenue impact.

Forecast delivered an end-to-end solution, with responsibilities for the data engineers to build out the data pipeline required for the modelling of the various KPI. Responsibilities for the scientists involved working closely and iteratively with the in-house finance team to build a solution that answers the right questions. Forecast worked to a tight deadline where the dates that customers can receive price increase notifications is fixed.

Outcome

The final modelling suite and Strategic Pricing Tool enable stakeholders to better understand customer behaviour in response to price increases and provides them with the tools to build revenue maximising strategies. In general, the framework is a leap forwards when it comes to more personalised pricing and will play a significant role in pricing strategy going forward.

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