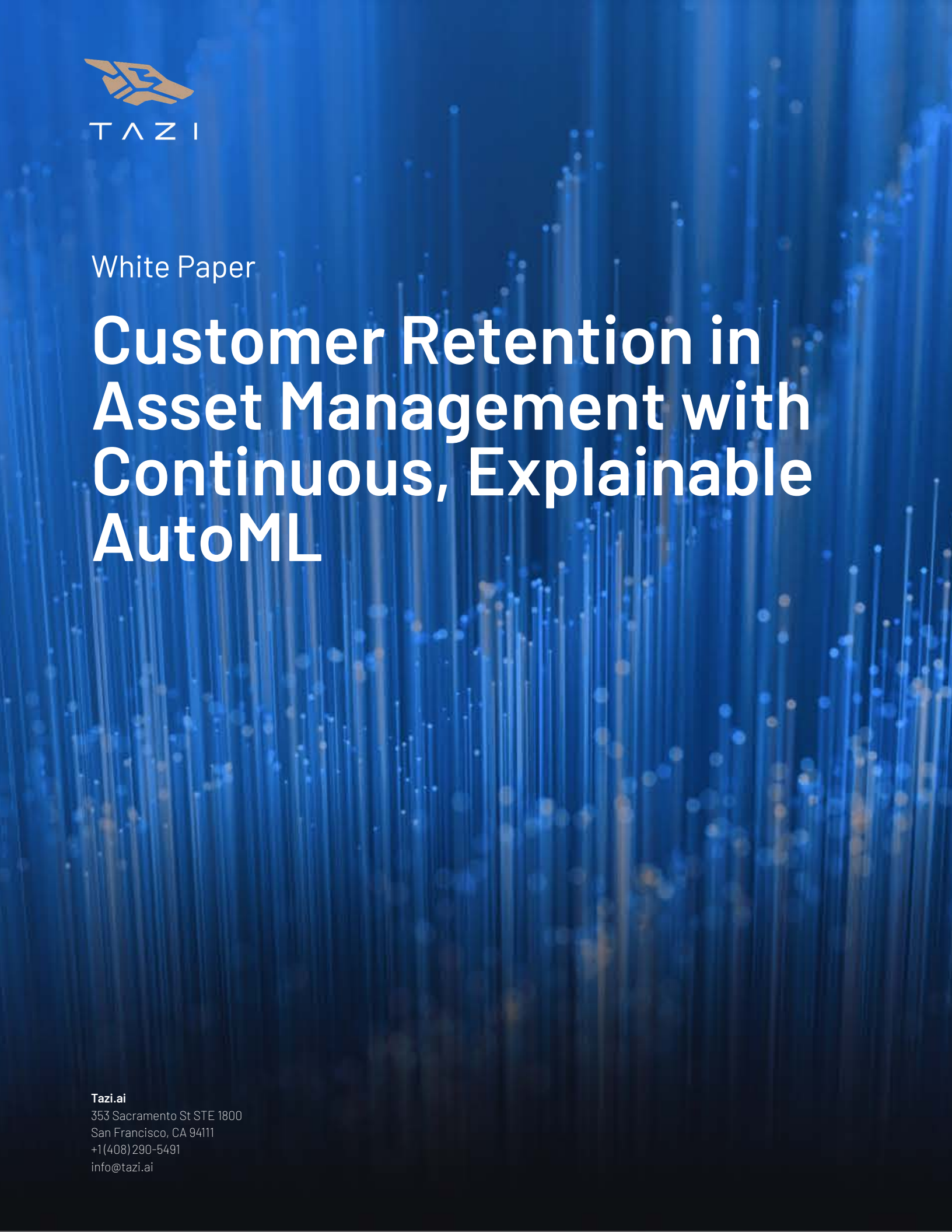

TAZI

White Paper

Customer Retention in Asset Management with Continuous, Explainable AutoML

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SUMMARY

Customer churn is a dynamic and important problem to solve for finance, specifically in asset management. The acquisition cost for each customer, combined with cross-product churn and the potential loss of assets in case of a churn, drives the need to proactively predict and prevent churn. Churn prevention is more beneficial than constant acquisition of new customers to replace the churners.

In this paper, we outline how TAZI's Customer Retention Solution works. This solution is based on TAZI's Continuous and Explainable, No-Code, Automated Machine Learning (AutoML) platform. We describe how continuous learning helps discover new evolving churn micro-segments. We also describe how business units, such as customer outreach teams, can take churn prevention actions easily and quickly using Explainable AI.

The resources at the end of the paper to see how much you could save with a tool like this and how you could create a customized churn prevention solution.

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INTRODUCTION

We all know that the cost of retaining a high LTV (lifetime value) customer is significantly less than that of acquiring a new customer. The financial organization also has an established track record with the existing customer and there are many unknowns associated with the newly acquired customer. Wouldn't the business benefit if there was a system available that monitored your existing customer portfolio and easily identified those medium to high LTV customers that might churn?

Many companies have attempted to build customer lifetime value models (CLV) but rarely have they been able to operationalize these models in a way that call center agents or agency personnel can easily take the right action to prevent the customer from leaving.

Traditional Machine Learning can detect complex patterns in data and make accurate predictions. However, opaque reasoning or complexity of most ML approaches hamper their use and benefit to the business. TAZI's AutoML system is designed from the ground up to be understandable by business users, enabling them to trust machine learning and stay in sync with continuously changing business dynamics. TAZI operationalizes machine learning models that enable business users to receive alerts or lists of who will churn, recommend the right action to take using the right channel and save your most valued customers.

When TAZI is deployed to reduce churn, your retention rates increase, your acquisition costs fall and your asset management process improves. Imagine if you also used TAZI to help your marketing team find those high-value prospects that look like your highest LTV already on the books and convert them too.

In this paper, we give details on the use and benefits of TAZI's Continuous and Explainable No-Code Automated ML platform for Customer Retention.

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Churn Problem Statement:

The asset management company needs a mechanism to detect predicted churn and take the right action to retain the customer across various micro-segments. The company needs to take action in advance before the customer leaves since it is nearly impossible to persuade a customer who has already left to return. To be able to take the appropriate business actions for each churn micro-segment of customers, the retention messages generated by machine learning models must be understandable by the retention agents. It is also important to consider the total assets that the customer has and prioritize according to the most valuable customers.

Churn risk varies over time and is based on many parameters such as commission paid, stock market volatility, competitors' actions, new regulations, sales representative and agency service, economic conditions in the region, etc.

Traditional machine learning models are not updated frequently, and generally only updated when they fail. The updates require huge time and effort of the data science teams. These models are black boxes where the business receives churn scores, but doesn't understand why churn is happening. If the machine learning models are accurate and trustable, then the appropriate churn prevention actions can be taken.

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TAZI's APPROACH

TAZI utilizes the Automated Customer Retention Approach shown in Figure1.

Figure 1: Automated Churn Reduction Approach

To keep up with the current continuously changing and evolving environment, machine learning systems need to be able to adapt "on the fly". They also need to quickly recognize and adapt to new strategies and pricing models introduced by your competition. To recognize and react to this ever-changing environment, batch machine learning models are not sufficient since they are already out of date by the time they are deployed. As customer retention variables are rapid, the only way to stay ahead of the market is through continuous machine learning.

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TAZI's continuous machine learning technology allows churn prediction models to be updated continuously so that they can predict increasing churn trends (Figure 2). The churn behavior changes due to a myriad of factors ranging from demographics, economy, competition against the company's own product or marketing actions. TAZI helps automatically and continuously determine the level of contribution of each of these factors that drive churn behavior.

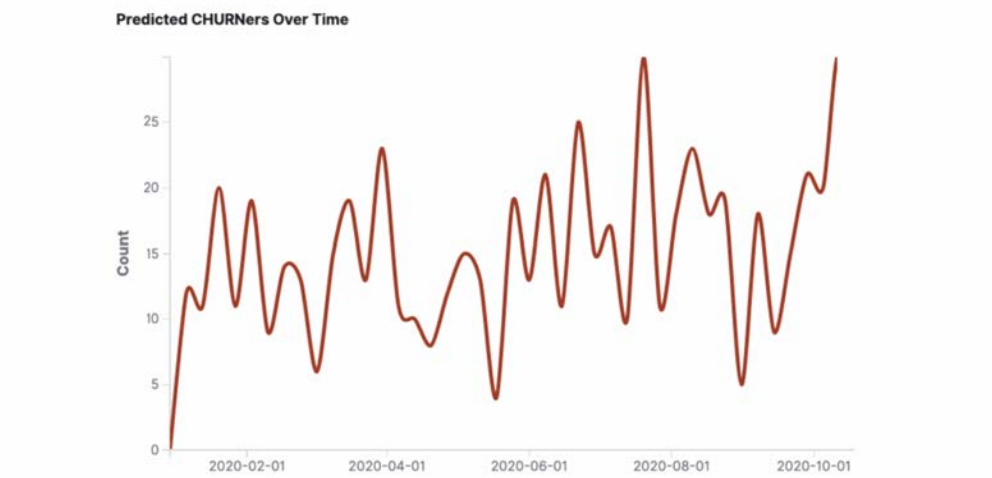

Figure 2: Identification of increasing predicted churn trends.

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The customer retention model explanations provide insights on churn within specific micro-segments. A micro-segment can be a class of customers that are of a certain demographic that is being recently targeted by a competitor who has just dropped their commission rates. A micro-segment can also be those customers that have the highest propensity to churn due to high commission rates or agent inattention. In Figure 3, the areas shown in red are micro-segments highlighting potential churners. An example micro-segment of predicted churn, based on agency name, sales representative name and portfolio earning last month are shown in the Figure as the most important features.

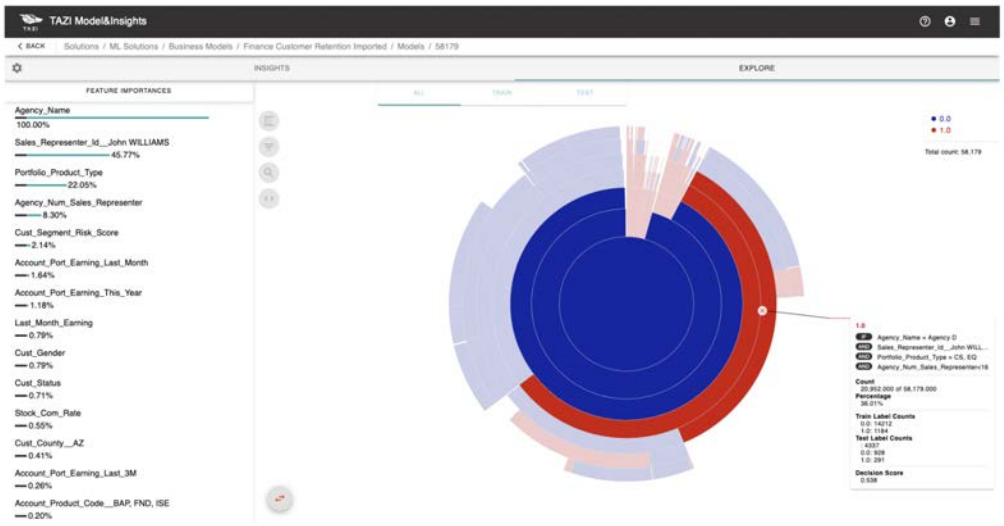

Figure 3: Explainable AI interface showing predicted churn micro-segments (in red) and highlighting a particular micro-segment. The variables used by the churn prediction model are shown on the left.

The appropriate action for churn prevention may depend on the micro-segment definition. Sending agencies a monthly list of which customers to call with the right message and the right channel could be an action. Another action might be to send a list of outbound calls for a call center agent or system-generated emails with tailored outreach messages based on that micro-segment's churn reason. Changing customer behavior may require actions such as commission rate review, suggesting new financial instruments, or even calling and understanding the reason behind the inactivity.

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TAZI can generate automated targeted intervention strategies by each micro-segment to inform the retention analyst of what offer is most likely to retain the customer along with the time of day and the best channel for outreach based on past interaction history. At a high level, the following is generated with drill down to the actionable data for the impacted customers (Figure 4):

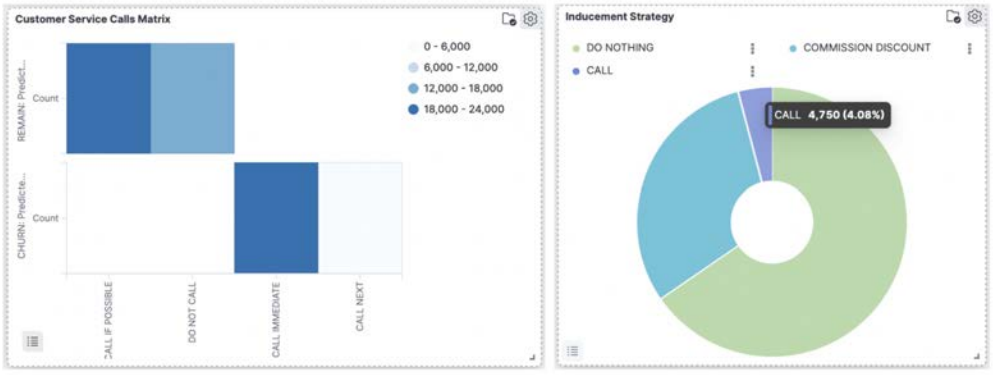

Figure 4: TAZI suggests the right channel for retention intervention.

In addition, when there are abrupt changes through competition, economic conditions, and risk levels, there may also be emerging micro-segments with small amounts of data where traditional machine learning models are not able to detect these new patterns. For these situations, the TAZI self-updating models can be fine-tuned by business SMEs who are able to detect newly emerging patterns for improved performance.

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With TAZI, the business analyst is now able to drill down into the micro-segment to view specifics around the churners along with the most likely churn reason and the intervention strategy with the highest probability of success. Based on the historical service patterns, the system recommends the right channel with the right offer that has the highest probability of success. For the example churn risk report in Figure 5, Jennie will respond favorably to a call, Bill will stay with a commission discount and Kevin will remain with a message reminding that he has a remaining balance on his account based on previous retention strategies that worked for similar customers.

CHURN RISK REPORT

Agency Name: Agency X
Main Contact: Bill Simmons
BSimmons@TIS.com
312-549-3768

Customer Name	Com Monthly	LTV	Churn Probability	Offer	Contact Method
Jennie Hill	$12.5K	9.5	TOPRISK	Call	630-439-1102
Bill Hosket	$1202	9	HIGH	Commission Discount	bhosket@gmail.com
Kevin Rall	$99	8.5	HIGH	Message	630-490-0094

Figure 5: Example Churn Risk Report.

When continuously self-updating machine learning models are deployed to predict and reduce churn, the dashboard in Figure 6 outlines the predictions and outcomes on reducing the churn. All customers could be observed in detail.

Data Table

116358 documents

data.Data_Date	data.Account_Id	predictedLabelNamed	decisionscore	actions	data.Account_Amount_Annual	data.Last_Month_Earning	data.Sales_Representer_Id
May 31, 2021	76,596	CHURN	0.69	COMMISSION DI SCOUNT	7,185.27	21.82	James SMITH
May 31, 2021	66,934	REMAIN	0.8	DO NOTHING	468,928.58	29,221.72	Danielle NICHOLS
May 31, 2021	75,028	REMAIN	0.837	DO NOTHING	207,870.61	1,824.23	Samantha HARRISON
May 31, 2021	72,421	REMAIN	0.5	DO NOTHING	52,059.13	1,155.26	Jason RAMIREZ
May 31, 2021	71,793	REMAIN	0.803	DO NOTHING	3,817,772.93	71,323.44	Ashley JORDAN
May 31, 2021	64,519	CHURN	0.656	COMMISSION DI SCOUNT	140,637.81	8,168.55	Robert JOHNSON

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Figure 6: Predicted Churn with Intervention Results.

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CONCLUSION

TAZI AI with its automation can help you identify those customers that are ready to churn, provide the reason(s) for the churn and recommend the right intervention to keep them on the books.

We now quantify what the value would be if you could easily identify and retain more customers. Figure 7 is an example of the TAZI impact on a $32M business with an 8.5% churn rate on the accounts. You can see the tremendous impact of reducing churn by 8.5% to 4%.

Date	Total Accounts	Total Churners	Churn Ratio
30.10.2020	12359	1051	8.50%
30.11.2020	12410	939	7.57%
31.12.2020	12623	965	7.65%
29.01.2021	12839	956	7.45%
26.02.2021	13081	876	6.67%
31.03.2021	13417	947	7.05%
30.04.2021	13703	792	5.78%
31.05.2021	13266	954	6.69%
30.06.2021	14514	872	6.02%
30.07.2021	14740	871	5.91%
31.08.2021	14659	591	4.03%

Annual Commission Saved: $1,249,000

Figure 7: An Example Savings Analysis with TAZI's Churn Reduction.

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To understand and quantify the impact on your book of business, please visit the TAZI Finance Customer Retention web page.

Curious:

- If you have enough and clean data to predict churn?
- How you can build your own evolving customer churn prediction models within 10-30 days?
- How you can start preventing churn within 1-2 months?
- How you can up-skill your business and data teams to adopt machine learning?
- Any other questions?

Contact us at: info@tazi.ai

For more information visit our website tazi.ai

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ABOUT TAZI

Artificial intelligence (AI) is a source of both huge excitement and apprehension, transforming enterprise operations today. It is more intelligent as it unlocks new sources of value creation and becomes a critical driver of competitive advantage by helping companies achieve new levels of performance at greater scale, growth, and speed than ever before, making it the biggest commercial opportunity in today's fast changing economy.

TAZI is a leading global Automated Machine Learning product/solutions provider with offices in San Francisco. TAZI is a Gartner Cool Vendor in Core AI Technologies (May 2019) and is considered as "The Next Generation of Automated Machine Learning" by Data Science Central.

WHO WE ARE

Founded in 2015, TAZI has a single mission which is to help businesses to directly benefit from Automated Machine Learning by using TAZI as a superpower, shaping the future of their organizations while realizing direct benefits like cost reduction, increasing efficiency, enhanced (dynamic) business insight, new business (uncovered), and business automation.

WHAT WE OFFER

Through its understandable continuous machine learning from data and humans, TAZI is supporting companies in banking, insurance, retail, and telco industries in making smarter, more intelligent business decisions.

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TAZI solutions are based on a most compelling architecture that combines the experiences of 23 patents granted in AI and real-time systems, proven at different global implementations.

Some unique differentiators of TAZI products are:

- Business users can automatically configure custom ML models based on their KPI and the available data. TAZI's Profiler accelerates this process through data understanding and automated cleaning, feature transformation, engineering, and selection capabilities.
- TAZI models learn continuously, and are suitable for today's dynamic, realtime data environments.
- TAZI models are GDPR compliant (no black-box models). They provide an
- explanation in the business domain's terminology for every result they produce.
- TAZI supports multiple (heterogeneous) data sources, i.e.,.: external, batch, streaming, and others.
- TAZI can learn both from human domain experts and from data, which speeds up accuracy improvement.
- TAZI's hyper parameter optimization feature reduces human time spent for model configuration. TAZI products contain algorithms that are developed and coded to be lean, efficient, and scalable.

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