How Artificial Intelligence can help maximise value and drive your growth

Combine non-traditional data sources with machine learning to create long-lasting customer relationships

experian™

71% of business leaders, interviewed in our new annual survey, say enhancing their analytics capabilities is a top priority*

Advances in technology and software are enabling organisations to adopt more powerful and advanced analytical approaches to help drive growth, efficiency, competitiveness and manage risk.

The availability of new data sources creates enormous potential for developing predictive credit risk management models which go far beyond 'traditional' internal and credit bureau data.

We have already invested in this area, developing extensive knowledge, experience and established a track-record in delivering big data, data science, advanced analytics and smart credit solutions, in numerous countries across the globe. Projects integrated with the traditional tools have quickly delivered increased benefits

into the different areas of the credit lifecycle - from marketing, to credit risk, collection, customer retention and fraud.

We've briefly outlined a suite of advanced analytics solutions that use non-traditional data sources, including contact centre voice calls, transactional credit card information and unstructured web data, combined with machine learning techniques, to successfully deliver origination, customer insights, collections, regulatory and fraud prevention solutions.

All are customised to best your needs - and the needs of your customers.

78% of organisations plan to invest in internal analytics tools and resources to help drive new initiatives*

*The new frontier: Unlocking the power of data – Forrester Consulting - July 2017.

Voice of Customer Analytics

Voice of Customer Analytics (VoC) uses information derived from multiple communication sources including text-converted voice calls, contact centre logs and reports to enable the development of predictive models for collections, fraud detection, regulatory and customer insights. By analysing favoured word combinations and phrases, VoC can identify typical customer behaviours, thanks to the use of advanced statistical methodologies from text analytics and predictive modelling of key data points in automatic text classification. A deep dive into natural language processing is also possible to help gain even more dynamic and accurate statistical models.

VoC analytics can also be used to meets the needs of numerous of business objectives - from marketing insights to risk management. Its wide-ranging applications include:

Collections

- Predict risk better and more dynamically

- Manage collections teams' performance with language insights

Regulatory – Compliance and quality evaluation of contact centres

- Monitor and control calls that follow the internal and external compliance polices or any regulatory constraints

- Evaluate the call centre operation by measuring operator efficiency against several metrics

Customer insights

- Solution to know your customer, working in the main challenges of CRM including lead identification, cross / up-selling and preventing churn, to enable action with smart and actionable insights

Fraud Detection

- Prevent / detect fraud on insurance claims and any related contact centre transactions

What value does VoC analytics create?

Unused voice and text data is a wasted and hugely valuable information asset. VoC enables you to get access to these sources to develop a host of new features and improve the performance of vital analytical models. They will help deliver significant financial benefits through better decision-making. It also offers value right across the customer cycle, from a reduction in delinquency of new applications, to increased revenue from collections. Our predictive VoC analytics consistently delivers highly targeted information, as well as being an innovative fraud detection tool for insurance, by helping analyse fraudsters' speech and behaviour patterns during the claim process.

How it works

Unformatted information is first converted into text files. From there, the analysis of key words and typical phrases takes place to develop advanced statistical methodologies for dynamic and accurate modelling. New findings and scores from text variables are then aligned with your business strategies and existing solutions to help predict customer behaviour. VoC is a consultancy analytics solution precisely customised to best suit your needs.

Voice of Customer Analytics is a complete solution to drive value from new data sources. Its main advantage is its high flexibility in specially designing it to meet the needs of any company that uses multiple customer communication channels.

Transactional Data Insights

The Transactional Data Insights Solution (TDIS) analyses historic and typical payments and credit card behaviour to accurately model income estimation, deliver enhanced customer insights and detect suspicious and fraudulent transactions. It uses transactional data to tackle a host of key challenges:

- Drive credit card customers' loyalty and reduce attrition risk by identifying typical spending patterns, based on their preferences and habits

- Increase volumes of spending with the development of critical stimulation models

- Offer recommendations - Card spend data at the merchant level can help deliver vital consumer insights and opportunities, enhance customer experience and drive potential revenue from partner merchants

- Spend attrition alerts - A consumer's transaction history can be used to predict future transaction patterns and deliver timely alerts on spend attrition risk

- Income estimation – Transaction values and behaviour can be used to develop improved income estimation models

- Fraud detection – Development of advanced statistical models using transactional data helps improve detection of new and emerging fraud patterns, based on anomalies in the typical spending DNA of each consumer

Transactional Data Insights extracts value from credit and debit card transactions. It is a new source of data for risk models, as well a new tool for accurate customer insight.

What value does TDIS create?

This solution stands out from traditional transactional data analysis thanks to state-of-the-art machine learning techniques to help map precise transactions patterns for every customer in your portfolio.

A highly accurate view of typical customer transactions, helps inform business strategies at every stage of the lifecycle - from identifying best product fits to suit your clients' needs, to churn detection indicators. Besides marketing insights, TDIS can be incorporated into risk-management by enhancing decision-making, responsible lending, treating customers fairly policies and detect fraudulent transactions.

How it works

We analyse historic card transaction data to create a segmented profile of each customer and provide a wealth of insight into their preferences and interests. With deeper knowledge about typical spending patterns, we can track all new transactions and apply them our machine learning models to enhance traditional predictive analytics and create a more accurate and detailed score.

As a next step, the same segmentation profiles, which are all transaction based, will help further develop predictive models to help define ongoing strategies. It can easily be applied to specific group of targeted clients, or right across the entire portfolio.

Web Data Analytics

The Web Data Analytics Solution (WDA) uses public unstructured data gathered from the web to develop models that enable companies to add another dimension to the credit risk matrix for portfolio assessment.

The value of Web Data Analytics

Our web data analysis already has a proven track record of delivering benefits for credit risk assessment of accounts. It offers:

- Improved risk assessment with the addition of public non-traditional and unstructured data

- Ability to highlight root causes of high-risk events

- Accurate prediction about future events and a customer's likely propensity to buy, churn, or engage

- Reduction in bad debt, improvements in acceptance rates and in the quality of accepted applications

- Early warning signals and deeper portfolio insights

- Improved statistical models based on machine learning techniques

How it works

Our comprehensive end-to-end WDA solution covers web crawling, site classification, text mining, segmentation analysis and machine learning models. Each account from a pre-defined sample is analysed, searched for on the internet with publicly-available information collected – an automated process known as 'crawling' or web data scraping.

Information is then classified under various categories by sophisticated text mining algorithms, before meaningful and relevant information is converted into usable data. Differing text mining and sentimental analysis methods can be applied to order unstructured data.

From there, predictive variables based on web data information are developed and machine learning techniques are applied to create a web-based score that can be combined with the internal or credit bureau information to better differentiate between good and bad accounts within customer segments.

Web Data Analytics assess customer behaviour through on-line presence measurement. It enables companies to add value to their existing credit risk matrix for portfolio evaluation.

Automatic System for Fraud Insights

The Automatic System for Fraud Insights (ASF) identifies suspicious and fraudulent applications by adopting advanced analytics. Among the biggest challenges in working with non-transactional fraud data is the scarcity of fraud cases that a classification algorithm can learn from. So, what is a blessing for your business can turn into the data scientist's biggest nightmare - simply too few frauds to analyse. At the same time, the imbalanced nature of fraud datasets often results in analytical models that are far too strict and often predict suspicious behaviour all or almost all the time. But by combining several state-of-the-art machine learning algorithms, ASF helps tackle the biggest challenge in fraud analytics by increasing detection while enabling your customers to get the right decision in the shortest possible time.

What value does Automatic System for Fraud Insights create?

ASF detects different types of fraud by combining numerous tools. No single tool works best in data modelling - some are great at detecting specific fraud types but may be too strict towards genuine customers, often labelling them as suspect. Other algorithms are more lenient but fail to detect some frauds. They also differ in the speed of execution, complexity and in the number of predictive variables they can efficiently handle. Combining different models provides greater flexibility. Key benefits include:

- Automated decision-making to help block application fraud

- Significant reduction in internal costs and needless manual reviews of suspicious cases

- Improved customer management and compliance

How it works

Historical application data is combined with machine learning techniques to manage any unbalanced datasets. From there, advanced statistical models are developed to identify different base classifiers which are then optimally-combined. Types of ensemble models range from bagging, random forests and boosting, to stacking, voting, and neural networks. These machine learning algorithms represent the very latest generation of tools in the palette of modern data science.

Test results on real fraud data have already demonstrated the sizeable benefits automated detection has when it comes to using advanced machine learning models. For instance, top-performing tools often deliver an increased discrimination of up to 20% when compared with the very best single-classifier algorithms.

Automatic System for Fraud Insights is a complete solution boosting fraud detection with machine learning techniques. It combines several state-of-the-art algorithms to stop fraud and automate decision-making.

What insight can Experian help you draw from your data?

We are focused on developing faster, smarter, innovative solutions that continually offer our clients a competitive advantage.

Let us help you better serve your customers and drive your growth.

About Experian

Experian unlocks the power of data to create opportunities for consumers, businesses and society. At life's big moments – from buying a home or car, to sending a child to college, to growing a business exponentially by connecting it with new customers – we empower consumers and our clients to manage their data with confidence so they can maximize every opportunity.

We gather, analyse and process data in ways others can't. We help individuals take financial control and access financial services, businesses make smarter decision and thrive, lenders lend more responsibly, and organizations prevent identity fraud and crime.

For more than 125 years, we've helped consumers and clients prosper, and economies and communities flourish – and we're not done.

Our 17,000 people in 37 countries believe the possibilities for you, and our world, are growing. We're investing in new technologies, talented people and innovation so we can help create a better tomorrow.

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