

REPORT REPRINT

This Impact Report was published by 451 Research as part of our syndicated Market Insight subscription service and subsequently licensed for commercial use by Yottamine Analytics.

Yottamine Analytics hones its machine-learning predictive analysis on finance

KRISHNA ROY

30 MAY 2017

In the early days of its life, the machine-learning advanced analytics vendor focused on insurance companies. Yottamine Analytics is now doubling down on the financial services sector by unleashing a cloud service designed to predict the outcomes of investment strategies.

THIS REPORT, LICENSED EXCLUSIVELY TO YOTTAMINE ANALYTICS, DEVELOPED AND AS PROVIDED BY 451 RESEARCH, LLC, SHALL BE OWNED IN ITS ENTIRETY BY 451 RESEARCH, LLC. THIS REPORT IS SOLELY INTENDED FOR USE BY THE RECIPIENT AND MAY NOT BE REPRODUCED OR RE-POSTED, IN WHOLE OR IN PART, BY THE RECIPIENT, WITHOUT EXPRESS PERMISSION FROM 451 RESEARCH.



©2017 451 Research, LLC | WWW.451RESEARCH.COM

Yottamine Analytics is gearing up to unleash a fresh offering. The company's YottamineAI Service, which is currently in beta and will be released in June, is designed for financial institutions needing to predict the outcomes of their investment strategies. The new offering marks a doubling down on the financial services sector for the machine-learning advanced analytics vendor, which cut its teeth in the insurance sector.

THE 451 TAKE

Yottamine Analytics has always held the view that competitive differentiation requires innovation in machine-learning algorithms. The company has remained true to this philosophy with its latest offering, YottamineAI Service. However, we wonder whether the firm is boxing itself into a niche by concentrating on one vertical market only. Landing some venture capital would address this issue by enabling management to build a sales and marketing function to accelerate the firm's revenue, and fuel product development to broaden its focus.

CONTEXT

Yottamine Analytics was an early entrant in the machine-learning advanced analytics sector, which is now vibrant and highly competitive, but was nascent when the firm was established. Yottamine Analytics was founded in 2009 by CEO David Huang, a former research scientist at Microsoft and former senior scientist at traffic-information provider INRIX.

In 2016 YottamineOP for Hadoop became the vendor's flagship offering as it refocused its algorithmic smarts on an Optimized Prediction (OP) algorithm-based advanced analytics platform. The company no longer actively markets Yottamine Machine Learning Service (YMLS), which was its first support vector machine (SVM)-based machine-learning cloud service for devotees of the R open source statistical computing language, launched in 2013.

Yottamine Analytics' portfolio is, therefore, now composed of two products and product-led professional services. YottamineOP for Hadoop is for predicting unique but infrequent high-value, exceptional events in data for risk modeling in insurance, for example, using large volumes of data residing in Hadoop and Cloudera's Enterprise Data Hub. The YottamineAI Service is a new addition to be shortly made generally available. The firm's consulting services are designed for organizations that want to use its machine-learning and predictive modeling capabilities but don't know where to start.

Bellevue, Washington-headquartered Yottamine Analytics remains small, with fewer than 10 employees. The firm also has fewer than 10 customers. Moreover, it has landed all of its customers without much external investment, having only raised a very small amount of angel funding. Although not actively looking for funding, management is open to offers, and not averse to venture capital.

PRODUCT/TECHNOLOGY

The company's new YottamineAI Service offering came into being by request. Management tells us that they were approached by a financial institution that wanted to predict the return on its investment strategies, using very few data points. YottamineOP wasn't suited to the problem, in large part because the machine-learning algorithms underpinning it were designed for very large data sets.

The company in question was also facing issues with highly volatile and constantly changing markets, and was struggling with a lack of in-house expertise when it came to data management and machine learning – issues it was also looking to Yottamine Analytics to address. The vendor is now making it generally available for any financial institution, particularly those on the 'buy side' of the house that need predictions on the return of their investment strategies.

To be more specific, the vendor's YottamineAI Service is all about making highly accurate predictions on financial time-series data, using only a small amount of data to adapt to and learn changing market dynamics. It is designed to compute four models, each of which has 102 data points. The offering is also computationally intensive – the reason Yottamine Analytics is bringing it to market as a cloud service. It will be available on Amazon Web Services (AWS) Virtual Private Cloud. Additionally, it is designed to avoid highly risky bets, while not missing out on positive returns, in order to serve up better predictions with a good ROI using good quantitative finance models. That said, management notes that it will also surface complex relationships between quantitative finance models and ROI strategies. Once the models are performing to satisfaction, it generates the predictions on a daily, weekly or monthly basis.

Security is another aspect of the offering – it is designed to encrypt data while it is being transferred and when it is in the system. Yottamine Analytics is using AWS's Key Management Services for managing the encryption process. Furthermore, the offering is designed to identify numerical patterns in the data, without knowing the context of the data, for additional security and privacy. Yottamine Analytics will also provide the option for two-factor authentication, if additional security is required.

The vendor's YottamineAI Service also has some data management capabilities. For example, it can automatically format the data, and will perform a few data transformation functions. Companies can also pull out the financial data requiring analysis, and put it into Excel spreadsheets for uploading into the system. Companies wanting additional help with data management or other aspects of the machine-learning-driven predictive analytic process can tap into the product-led professional services, which are also available with the offering.

COMPETITION

Management cites open source machine-learning libraries – and TensorFlow, in particular – as Yottamine Analytics' primary competition. Using an open source machine-learning environment remains a popular approach to tackling the same use cases Yottamine Analytics is looking to address. That said, open source machine-learning tools can incur ongoing management and maintenance issues, and require machine-learning expertise – all of which Yottamine Analytics is looking to eliminate by pitching a 'give us your data, and we'll give you a prediction' message.

However, the vendor is not alone in pitching this promise – the machine-learning predictive analytics sector continues to heat up and get increasingly crowded. Pure plays include DataRobot, Dataiku, BigML, DMWay, H2O.ai, Ayasdi and Skytree. Enova Decisions is one of the latest market entrants, with its on-demand predictive decision management cloud service, which we also think is competitive, even though it has different architectural underpinnings to the YottamineAI Service.

Yottamine Analytics is looking to differentiate itself from fellow machine-learning advanced analytics players by delivering proprietary machine-learning technology built on homegrown algorithms, which is somewhat of a contrarian approach these days. Why? Many vendors consider the reinvention of machine-learning algorithms to be pointless when there are so many open source options available.

Lastly, we think machine-learning services from cloud providers AWS, Google and Microsoft provide another alternative, given that YottamineAI Service is a cloud service, so it will be adopted by vendors that are comfortable with a cloud delivery model. Prospects looking for another big-name enterprise vendor might also consider IBM or SAS Institute, which also deliver machine learning in the cloud.

SWOT ANALYSIS

STRENGTHS

Yottamine Analytics is an experienced machine-learning vendor with significant smarts in algorithm development. The firm also has a solid background in addressing financial services use cases, which it is putting to good use.

WEAKNESSES

The company's lack of investment in sales and marketing means it suffers from a low market profile. The firm also has relatively few customers for a vendor that has been in the market for four years.

OPPORTUNITIES

Given the current buzz around machine-learning-driven predictive analytics, the time could be right for Yottamine Analytics to land some funding. A VC infusion could be used to take the firm to the next level by investing in marketing and sales, as well as product development.

THREATS

Yottamine Analytics could get acquired, which may be cause for concern for its existing customers. Market consolidation is already occurring, as evidenced by the growing number of acquisitions that have resulted in machine-learning pure plays ending up inside larger entities.