Cybage seeks gold in AI-assisted analysis for business users with DecisionMines

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By Krishna Roy

The company entered the vibrant but crowded AI-driven analytics sector with DecisionMines, designed to provide actionable insights using its underlying homegrown machine-learning smarts to assist decision-making by humans.

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Summary

Cybage, a veteran software services and product engineering company, is looking to cement its presence as a purveyor of AI-assisted analytics for business folk using its DecisionMines product. DecisionMines is all about furnishing this audience with goal-oriented decision management in the form of prioritized predictions, forecasts and recommended actions in order to make analytics actionable.

451 TAKE

Cybage's DecisionMines is a well-conceived offering with a maturity that belies its time as a commercial offering. While DecisionMines' business-user focus separates it from many other AI-driven analytics platforms, the company could benefit from giving it further differentiation, seeing as AI-enabled advanced analysis is a cutthroat and highly competitive market segment. Including more features to address operationalization and deployment issues, which we view as critical to enterprise adoption of machine-learning-based analytics, would be one way to do that.

Context

Cybage made a first foray into selling its own intellectual property in early 2018 when the company unleashed DecisionMines, a machine-learning-based analytics platform for AI-augmented decision-making targeted at business users. Cybage launched DecisionMines as a commercial product to new and existing customers about a year ago, having spent over a decade using it internally for data mining and predictive analytics projects.

DecisionMines is central to Cybage's strategy to derive revenue from product sales. Cybage is arguably best known as an Indian software services company. However, the 23-year-old industry veteran also has a strong background in product engineering from working with the likes of Symantec, Experian and Google. Moreover, Cybage has a global presence with offices in the US, Australia, Canada, Germany, Japan, The Netherlands, Singapore, the UK and Ireland.

Furthermore, Cybage continues to grow its DecisionMines team, which had a cited 150 employees when we previously checked in with management in April 2018. Cybage notes that its DecisionMines team has grown to 250 staff – and the company as a whole has increased its headcount to more than 6,000 personnel, from about 5,000 employees last April.

Product strategy

DecisionMines' core IP is in the runtime environment, scoring and machine-learning engines within the offering. At the heart of DecisionMines are homegrown machine-learning algorithms that drive the offering's predictive and prescriptive analysis capabilities.

DecisionMines primarily employs supervised machine learning involving the inferring of a function from labeled training data consisting of a set of training examples. DecisionMines' smarts in supervised learning include Linear Regression and Decision Trees algorithms, as well as Bayesian Logic filters. The offering also employs deep learning for certain tasks such as sentiment analysis and segmentation, and houses algorithms for operations research, which is typically used in the management of organizations.

DecisionMines essentially creates a model, such as a customer retention model, by working out which algorithms need to come together to address customer retention analysis, for example. Indeed, Cybage seeks to differentiate DecisionMines from other AI-driven analytics platforms by playing up its ability to use the most appropriate algorithmic techniques for the analysis in question.

DecisionMines' ability to augment and assist human decision-making is another aspect of the offering Cybage is using to single it out from other AI-driven analysis platforms. As we noted in a previous report, any action is undertaken by humans rather than by DecisionMines, which is why the company positions it as 'integrating the science of data with the art of judgement.'

For example, DecisionMines' ModelBuilder is designed to be used in tandem with input from a subject matter expert (data scientist), who has domain knowledge of the model required, for model discovery and validation. DecisionMines' Simulation Services also relies on expert involvement in order simulate customer data.

DecisionMines creates a model in order to deliver a Decision Point. It can also generate several Decision Points, if required. The Decision Point takes the form of scored insights in a dashboard – dashboards are the offering's default user interface. DecisionMines can also expose all functionality via an API gateway. The Decision Point is arrived at by using a system of multidimensional scoring to generate a list of suggested insights and actions that are prioritized using known goals.

DecisionMines can hook into data from various third-party environments including ERP and CRM apps, data warehouses, data lakes, Microsoft Excel and flat files. The offering also houses web services for data integration purposes, has a direct import facility, and an ingestion layer for creating new adapters, if required. Expanding connectivity to data sources is an ongoing development priority.

In addition, it houses data transformation and management capabilities, and a data store for data processing and modeling in order to adhere to an analytics platform play. DecisionMines is built on a Java-based parallel processing architecture, which uses Apache Spark for further performance gains. It is available as a cloud service (public or private), on-premises and as a hybrid play.

Furthermore, DecisionMines comes with out-of-the-box templates for wealth management, catalog management, fleet management, franchise performance, talent acquisition, management and retention, property management, risk management and revenue management. The company is looking to expand its adoption into other industries, in part through the creation of more vertically orientally templates, which will be crafted internally or by partners.

Use cases

Customer retention in the wealth management arena is one cited use case. The user essentially logs into DecisionMines and is presented with the next customer that is likely to be lost, and the top four reasons why this is going to happen. Wealth management is cited as a growing use case.

DecisionMines is also employed by banks to increase customer and prospect conversions, and in retail for inventory optimization. Cybage currently has four customers in production using the offering.

Competition

DecisionMines has entered a sizzling but crowded sector, given the pickup in vendor activity in AI-based analytics of late, which has resulted in offerings of this ilk from vendors already in analytics, or making a first foray to capitalize on this growing market opportunity.

Cybage is clearly in the latter category. Cybage's predominate consulting focus means Accenture immediately springs to mind as a rival. Accenture bought AI-driven analysis vendor Kogentix in July 2018 as an 'acqui-hire' and technology deal in order to bolster its Applied Intelligence strategy.

Organizations looking for a cloud service will also consider Amazon Web Services, Google and Microsoft, which all have machine-learning-driven analytics platform, albeit ones that are targeted at developers. That said, AWS et al. are looking to simplify the building of machine-learning models, which is an objective Cybage also focuses on in DecisionMines in order to make it business-user-friendly.

DecisionMines' enterprise focus is also likely to elicit comparisons with SAP Analytics Cloud and Leonardo Machine Learning, IBM Watson, and SAS's platform and Viya cloud-friendly architecture, which all support similar use cases. Nara Logic is another potential competitor, owing to the company's ability to generate similar ML-driven insights and recommendations.

We also wonder whether Cybage's positioning of DecisionMines for prescriptive analytics use cases will result in it competing against prescriptive analysis pure plays AYATA and RiverLogic, as well as ML-driven predictive analytics and forecasting specialist Prevedere.

Finally, it is worth distinguishing DecisionMines' approach from that of data science automation platforms from the likes of DataRobot, dotData and H20 (Driverless AI), which have a different fundamental concept because they espouse very limited or no human involvement in order to fill the skills gap required to deliver advanced forms of analysis to a business audience.

SWOT Analysis

STRENGTHS
Cybage has deep credentials in predictive analytics and machine learning, having spent 10 years refining them before bringing DecisionMines to market.

WEAKNESSES
DecisionMines has limited market visibility in the analytics sector. Cybage is not a known name in this space either.

OPPORTUNITIES
Cybage could benefit from adding further operationalization capabilities to DecisionMines so it can better address 'the last mile' of AI-driven analytics once models have been created and placed into production.

THREATS
DecisionMines is operating in a sector choked with established vendors and startups that may not provide exactly the same capabilities, but are gunning for mindshare and generating significant buzz as a consequence.