



Market Insight Report Reprint

Domino doubles down on flexibility, openness and model monitoring for enterprise data science

September 16 2021

Krishna Roy

The company has been busy cementing a longtime strategy to provide large organizations with a platform that enables them to preserve investments already made in programming languages, tools, compute environments and infrastructure employed for data science. Domino is also reinforcing its model-monitoring capabilities in support of enterprise MLOps.

451 Research

S&P Global

Market Intelligence

This report, licensed to Domino Data Labs, developed and as provided by S&P Global Market Intelligence (S&P), was published as part of S&P's syndicated market insight subscription service. It shall be owned in its entirety by S&P. 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 S&P.

Introduction

Domino Data has been busy cementing a longtime strategy to provide large organizations with a platform that enables them to preserve investments they've already made in programming languages, tools, compute environments and infrastructure employed for data science. The company is also reinforcing its model-monitoring capabilities in support of enterprise MLOps. Domino is delivering flexible and open-code-first data science to teams of data scientists in large organizations so they can use its platform to create, train and deploy models into production, as well as keep them up to date – a focus that is reflected in the company's latest two releases.

THE 451 TAKE

Domino's longtime commitment to tech-agnosticism is impressive because it involves keeping abreast of an ever-expanding array of third-party products used for every aspect of data science – not just for model creation but also for hardware and other infrastructure used to operationalize models once they have been created. Domino has also been widely emulated; nonetheless, the company remains a 'go to' name for collaborative code-first data science for large teams of expert data scientists, and with recent model-monitoring enhancements, it is further addressing the critical area of enterprise MLOps, too. Domino continues to be one of a few vendors to offer a code-based data science platform capable of providing the same experience in the cloud as on-premises. That's vital because not every enterprise is 'all in' with the cloud, even though public clouds are popular for machine learning. Companies that already have machine learning projects in play chose the public cloud as the most popular primary venue for storage (51%), training (39%) and predictions (37%) in our Voice of the Enterprise: AI & Machine Learning, Infrastructure 2021 survey.

Details

As an early pioneer of agnosticism and heterogeneity, Domino was instrumental in shaping the criteria for enterprise data science platforms. Indeed, when the company was founded in 2013, it embraced a mixture of open source and proprietary data science tools, languages and frameworks from the get-go so data scientists didn't have to learn new ones to use its platform for their enterprise data science initiatives. The company continued with this strategy in Domino 4.5, unleashed in June, and Domino 4.6 in September. Furthermore, in 2018 Domino introduced a model management framework as an add-on module, recognizing that large organizations require support for the full data science lifecycle, and that requires model operationalization, which is where Domino Model Monitor fits in.

Domino's early positioning was as a 'GitHub' – or system of record – for data science. Indeed, the vendor continues to use the comparison to communicate its value to data scientists as a version-control platform for their workflows to make them reproduceable by using Git as a repository. Furthermore, Domino integrated with Git in 2017 to understand how data scientists work with Git so that it could provide the tools and workflows to make using Git codebases as easy as possible.

GitLab integration in Domino 4.6 is all about building on the love data scientists already have for Git through integration with GitLab, which is used as a centralized environment for features associated with models. Domino 4.6 essentially enables GitLab users to create a new GitLab repository during the Git-based project-creation process. Domino has also embraced Git in other ways. Domino 4.5 enables data scientists to browse the content of linked Git repositories natively from within its platform, as well as streamline the setup of Git-based projects. The latter is delivered through hooks into CodeSynch, a third-party tool used to stream code changes in real time to the cloud. When data scientists create a project in Domino, they have the option to link to an existing Git repository or create a new GitHub or GitHub Enterprise repository for Git-based projects using CodeSynch.

For about a year, Domino has provided the ability to provision and orchestrate Spark clusters in a point-and-click manner so data scientists don't have to rely on IT to do it on their behalf. Data scientists require a Spark cluster to support compute-intensive workloads such as deep learning. Domino 4.6 adds easily deployable access to Ray.io, an open source offering for scaling Python from single machines to large clusters, as well as Dask, an open source library for parallel computing written in Python, in order to embrace other types of scaling environments for data science workloads using a point-and-click approach. Furthermore, Domino had previously undertaken an engineering effort to support containers by enveloping Kubernetes to engender cloud and infrastructure portability. Domino 4.6 is certified for Amazon EKS, which is designed to make it easy to run Kubernetes on the AWS cloud and on-premises.

Finally, Domino continues to bolster its model monitoring add-on. Domino Model Monitor is now designed to automatically compute data drift and model quality across billions of daily predictions courtesy of the new Domino Elastic Monitoring Engine that underpins it. Domino Model Monitor is also now available on cloud infrastructure from AWS, Google and Microsoft, and has a new configuration setting that enables single sign-on between it and the rest of the vendor's platform.

CONTACTS

The Americas

+1 877 863 1306

market.intelligence@spglobal.com

Europe, Middle East & Africa

+44 20 7176 1234

market.intelligence@spglobal.com

Asia-Pacific

+852 2533 3565

market.intelligence@spglobal.com

www.spglobal.com/marketintelligence

Copyright © 2021 by S&P Global Market Intelligence, a division of S&P Global Inc. All rights reserved.

These materials have been prepared solely for information purposes based upon information generally available to the public and from sources believed to be reliable. No content (including index data, ratings, credit-related analyses and data, research, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of S&P Global Market Intelligence or its affiliates (collectively, S&P Global). The Content shall not be used for any unlawful or unauthorized purposes. S&P Global and any third-party providers, (collectively S&P Global Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Global Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON "AS IS" BASIS. S&P GLOBAL PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Global Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global Market Intelligence's opinions, quotes and credit-related and other analyses are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Global Market Intelligence may provide index data. Direct investment in an index is not possible. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Global Market Intelligence assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P Global Market Intelligence does not endorse companies, technologies, products, services, or solutions.

S&P Global keeps certain activities of its divisions separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions of S&P Global may have information that is not available to other S&P Global divisions. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P Global may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Global reserves the right to disseminate its opinions and analyses. S&P Global's public ratings and analyses are made available on its websites, www.standardandpoors.com (free of charge) and www.ratingsdirect.com (subscription), and may be distributed through other means, including via S&P Global publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.