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AWS primes QuickSight for embedded and ML-infused business intelligence

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The hyperscaler unveiled Amazon QuickSight six years ago, marking its foray into BI with a SaaS play married to its cloud platform. In this report, we examine how QuickSight has morphed from supporting relatively basic dashboard and ad hoc reporting use cases into an ML-infused analytics service.

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Introduction

When Amazon Web Services introduced QuickSight in 2015, it was – by the company’s own admission – a relatively basic BI service. QuickSight has naturally matured. Indeed, AWS notes that it has added over 350 features to it since launch. Some of the most noteworthy have appeared in the past two years as they have opened the door to increased user-friendly and pervasive rollouts by integrating four forms of machine learning (ML) and functionality to support embedded BI.

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QuickSight’s raison d’être remains for companies that want to go all-in on AWS, owing to its deep integration with the AWS cloud and other AWS services. Indeed, the company notes that it does see some customers choosing it as part of their initial AWS deployment, even though it disagrees that non-AWS customers wouldn’t consider the service. But for those that are AWS shops, it is one of the most attractively priced BI cloud services available. That said, QuickSight is light on built-in data integration capabilities, requiring AWS Glue DataBrew for more heavy-duty visual data preparation and transformation.

As such, ML-driven data prep would be a good addition. Moreover, it would bolster existing ML-driven capabilities, which are now in high demand, according to our survey data. Two years ago, 32% of respondents declared themselves uninterested in new ML-driven augmented interfaces for analysis. This year, only 11% declared no interest on behalf of business and data analysts, while 13% declared no interest for senior and departmental/line-of-business decision-makers, according to 451 Research’s Voice of the Enterprise: Data & Analytics: Data Management & Analytics 2021 survey.

Details

QuickSight was architected to be a serverless, cloud-native business intelligence service with pay-as-you-go pricing. It has been infused of late with ML-driven insights.

QuickSight Q (Q), currently in preview, is the latest example of its ML based capabilities. Q uses natural language processing to enable users to ask questions of data in sentence form, in a search bar, which are answered in visualizations or a calculated metric. ‘What were sales in California last year?’ or a comparison question such as ‘How do sales compare between New York and California?’ exemplify Q’s capabilities. Q essentially infers semantic meaning from datasets by mapping out relationships across data and building the required indices for accurate answers, drawing on a ML-powered layer to add semantics and relationships to data.

QuickSight’s other forms of ML-driven insights are natural language generation to automatically provide narratives in text to illuminate visualizations or accompany visualizations in a dashboard; automated anomaly detection to surface hidden trends and outliers in data as well as alert the user to them; ML-driven forecasting; and SageMaker ML model integration. ML-driven forecasting is all about providing point-and-click forecasting for key business metrics, such as sales forecasts. SageMaker ML model integration means users can visualize predictions generated by Amazon’s ML service using QuickSight.

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Two years ago, AWS began bolstering QuickSight for embedded use cases so that it could be used by OEMs, ISVs, app developers and others for integrating dashboards and reports into the likes of SaaS apps and enterprise portals. Although the company cites QuickSight's scalable, serverless, multi-tenant architecture as already capable of supporting deployments to 100,000 users or more in an embedded or stand-alone setting – without having to build, set up and manage infrastructure, or think about server capacity – recent developments make it better suited for embedding.

First, in late 2020 QuickSight allowed its authoring environment to be embedded. The move means end users can create their own dashboards, reports and insights, rather than rely on dashboard and analysis created on their behalf. QuickSight also now has namespaces – a multi-tenant capability to enable ISVs and others to keep customer data separate while supporting multiple workloads within the same QuickSight account – to better support embedded BI. Second, freshly introduced Capacity Pricing Plans are all about making QuickSight more attractive for embedded analytics. Starting at \$4,800 per month for 200,000 sessions, with a session 30 minutes long, Capacity Pricing is also available in larger plans with lower per-session charges.

Under QuickSight's regular user-based pricing model, individual content consumers pay \$0.30 a session with a maximum charge of \$5 per user, per month. Authoring to create and publish interactive dashboards costs \$18 per author, per month, under an annual commitment – or \$24 per month, on a month-to-month basis.

In short, QuickSight is considerably cheaper than offerings from established BI specialists such as Tableau, Qlik and Microsoft (Power BI). However, those vendors' offerings have expanded functionality – particularly in relation to data management and collaboration – that QuickSight doesn't.