Introducing ML Insights with Amazon QuickSight

Luis Wang
Principal Product Manager
AWS
Our Beliefs

• **Insights for ALL users** of an organization

• **Innovate Quickly** on behalf of customers

• **Standalone or Embed** into applications

• **ML is the future** for insights from data
One Platform for Data and Analytics

Broatest and deepest portfolio of purpose-built services

**Business Intelligence & Machine Learning**

<table>
<thead>
<tr>
<th>QuickSight</th>
<th>Machine Learning</th>
</tr>
</thead>
</table>

**Relational Databases**

- Aurora
- RDS

**Non-Relational Databases**

- DynamoDB (Key value/Document)
- ElastiCache (Redis, Memcached)

**Analytics**

- DW  |  Big Data Processing  |  Ad hoc
- Redshift
- EMR
- Athena

**Data Lake**

- S3/Glacier (Storage)
- Glue (ETL & Data Catalog)
- Macie (Data Protection)

**Data Movement**

- Database Migration Service  |  Snowball  |  Snowmobile  |  Kinesis Data Firehose  |  Kinesis Data Streams

© 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
**Why QuickSight?**

**No servers to manage**
Amazon QuickSight has no servers or software to manage, maintain, deploy, upgrade or migrate. We do the heavy lifting so you don’t have to.

**Easily scale - 10 users to 10,000**
Amazon QuickSight automatically scales with your usage and activity, with no need for additional infrastructure. Amazon QuickSight will grow with your organization’s needs from a few users to tens of thousands of users.

**Build end-to-end BI solutions**
Amazon QuickSight integrates with your data sources and AWS services like Amazon Redshift, Amazon S3, Amazon Athena, Amazon RDS, AWS CloudTrail and more - providing you with everything you need to build an end-to-end BI solution.

**Pay only for what you use**
Provide read-only access to the interactive dashboards for Amazon QuickSight and pay only when your users access them with pay-per-session pricing. With Amazon QuickSight there are no upfront costs, no annual commitments and no charges for inactive users.

**ML Insights** NEW
With ML-powered anomaly detection, forecasting, and alerts and with automated yet customizable natural language narratives, you can delight your customers with never-before functionality in a BI tool.

**Dashboard Embedding** NEW
Eliminate dashboard development and maintenance activity by embedding dashboards built in Amazon QuickSight. Secure (SSO auth), easy (JavaScript SDK + user/group APIs). Cost-effective (pay-per-session)

**Sign up now @ https://quicksight.aws**

© 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
120+
new features released since launch

Readers
Aggregate Calculations
Dashboard Save As

Groups support in RLS

Private VPC connectivity
25 GB SPICE tables

25 GB SPICE tables

Spark and Presto Connector
Scheduled Refresh

Just In Time Provisioning

Search
Totals

Top / Bottom Filters

Athena connector

Aurora PostgreSQL

Aurora PostgreSQL

Email Reports

Hourly refresh
URL Actions

Hourly refresh
URL Actions

ML Insights

Dashboard Embedding

Cascading controls

Cascading controls

Row Level Security

Row Level Security

Federated SSO

Export to CSV
S3 Analytics

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!

New!
Pay-per-Session Pricing

For Deploying insights at scale, across your entire organization.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Readers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create and publish interactive dashboards</td>
<td>Secure access to dashboards anytime, anywhere</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>$18</th>
<th>$0.30</th>
<th>$5</th>
</tr>
</thead>
<tbody>
<tr>
<td>/user/month</td>
<td>/session*</td>
<td>/user/month</td>
<td></td>
</tr>
</tbody>
</table>

- **$18** /user/month (Billed annually)
- **$0.30** /session*
- **$5** /user/month

$24/user/mo. paying month to month

*session = 30 mins. From login

QuickSight

© 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
“Given the scale of our data, finding the most valuable insights is like looking for a needle in a haystack.”
Introducing ML Insights
Three Powerful New Features

ML Anomaly Detection
Uncover hidden insights by continuously analyzing across billions of data points.

ML Forecasting
Predict key business metrics with point and click simplicity.

Auto-narratives
Tell the story of your data in plain language narratives.
Why ML Insights?

- **Out-of-the-box** machine learning for anomaly detection and forecasting
- **Easy to get started** with point and click simplicity
- **No custom development** from scratch
ML-powered Anomaly Detection

Challenges

- Hidden in aggregates
- Data blind spots
- Slow to react to business incidents
- Manual analysis doesn’t scale
- Not for BI

Our Solution

- Analyze millions of metrics
- Continuously run in background
- What happened AND why
- No ML expertise needed
- Usage-based pricing
ML-powered Forecasting

Challenges

Spreadsheet are complex to maintain
Doesn’t learn, doesn’t scale
How do you deal with outliers?
Hard to deal with changes
Simple things are hard to do
BI forecasting as too basic

Our Solution

Point and click forecasting
Continuously learns from data
Automatically excludes outliers
Imputes missing values
Detects seasonality and trend
No ML or Excel needed
Auto-narratives

Challenges
What is the data trying to say?
Hours in front of dashboards
Sifting through charts and tables
Deciphering rows and columns of data
Drilling in and slicing and dicing
Time consuming, not scalable!

Our Solution
Insights in plain language
Embedded in your dashboard
Fully customizable templates
Easy to get started
No coding necessary
Looking beyond visualizations

© 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Anomaly Detection Pricing

Usage-based pricing model. No upfront. No commitment.

Try ML-powered anomaly detection for free for the first two months of usage for up to 500,000 metrics processed per month.

<table>
<thead>
<tr>
<th>Volume Tier</th>
<th>$ per thousand metrics processed</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 1,000,000 metrics processed</td>
<td>$0.50</td>
</tr>
<tr>
<td>Next 9,000,000 metrics processed</td>
<td>$0.25</td>
</tr>
<tr>
<td>Next 90,000,000 metrics processed</td>
<td>$0.10</td>
</tr>
<tr>
<td>&gt; 100,000,000 metrics processed</td>
<td>$0.05</td>
</tr>
</tbody>
</table>
# Pricing Examples

<table>
<thead>
<tr>
<th>Examples</th>
<th>Metrics</th>
<th>Schedule</th>
<th>Metrics Processed</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orders for 1,000 products across 20 countries</td>
<td>21,020</td>
<td>Daily</td>
<td>630,600 metrics processed per month</td>
<td>$315 / mo</td>
</tr>
<tr>
<td>Uptime or failure rates for 5K smart devices deployed worldwide</td>
<td>5,000</td>
<td>Hourly</td>
<td>3.65MM metrics processed</td>
<td>$1,162 / mo</td>
</tr>
</tbody>
</table>
Customers and Use Cases

Expedia

RICOH
imagine. change.

SIEMENS
Ingenuity for life

TATA
CONSULTANCY SERVICES

MAGEBIT

DAISO
Monthly QuickSight Webinars

https://zoom.us/webinar/register/WN_HTxMzjx4Sb-HcRuspdB9ZQ

• Mar 27, 2019 9:00 AM
• Apr 24, 2019 9:00 AM
• May 22, 2019 9:00 AM
• Jun 19, 2019 9:00 AM
Thank you!

Luis Wang
wangluis@amazon.com