



INNOVATE

DATA AND AI/ML EDITION

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Democratize analytics and machine learning with no-code AWS services

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Agenda

- Evolution of data analytics & machine learning (DAML) lifecycle
- Current state & challenges for DAML
- Scaling of DAML value creation
- No-code DAML solution – Amazon SageMaker Canvas & Amazon QuickSight
- Demo – Step by step walkthrough of loan repayment prediction
- Getting started with AWS

“ Today - more than ever before - data is the genesis for modern invention. ”

Dr. Swami Sivasubramanian

VP, Database, Analytics and Machine Learning, AWS

<https://aws.amazon.com/blogs/big-data/data-the-genesis-for-modern-invention/>



Organizations want more value from their data



**Growing
Exponentially**



**From new
sources**



**Increasingly
diverse**



**Used by
many people**



**Full of
buried
insights**

Put data to work



**Make better
decisions**



**Improve
efficiencies**

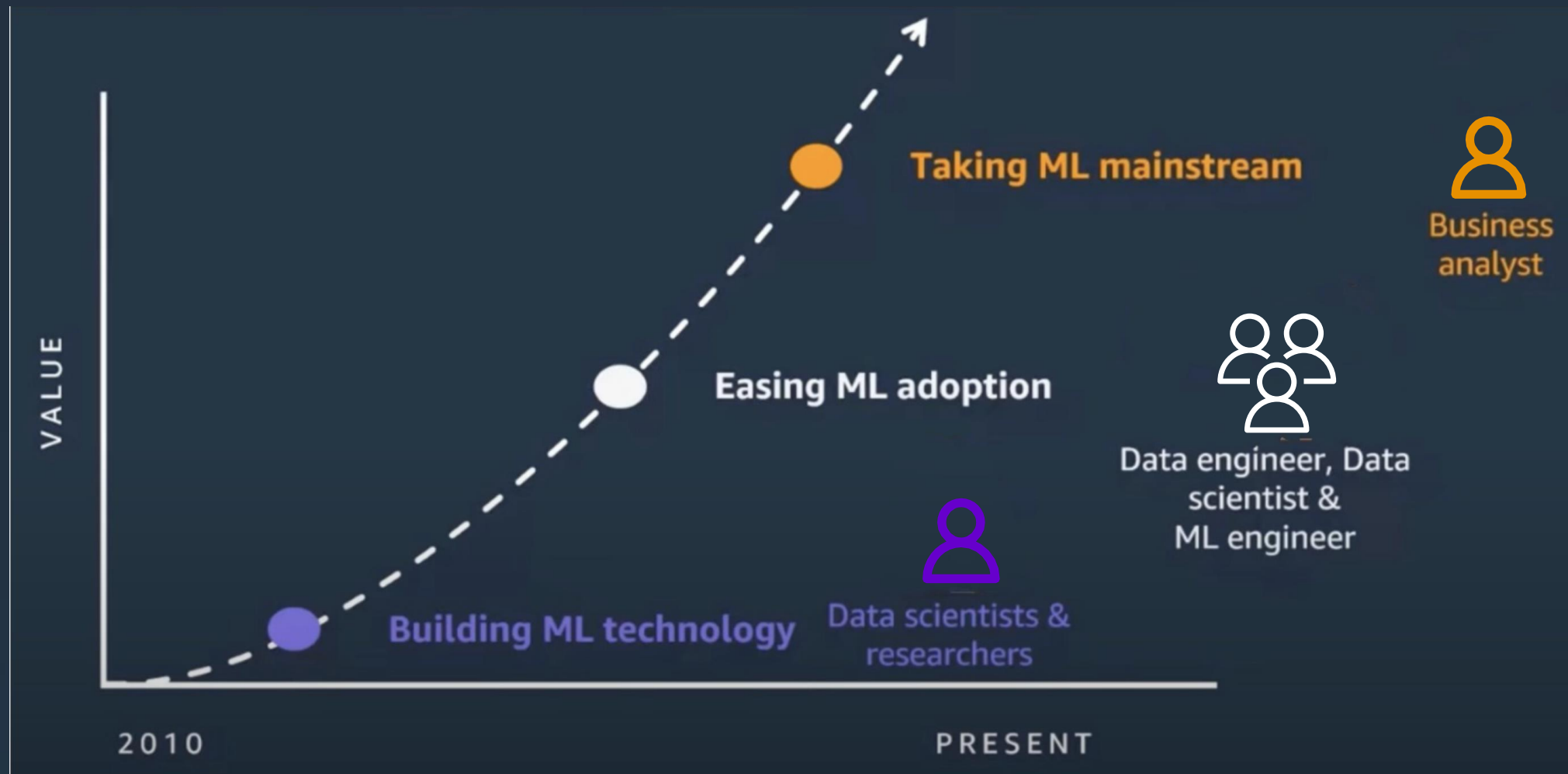


**Respond
faster**



**Uncover
opportunities**

Machine Learning industry maturity



Data analytics & machine learning typical lifecycle

Inventory Forecasting

Churn Prediction Sales Conversion



Prioritized
Use Cases

Step

**Business
Requirements**

**Data Preparation &
Feature Engineering**

**Model Development,
Training, and Tuning**

**Model Deployment &
Monitoring**

Owner

Business Leads, Domain
Experts, and Business Analysts

Data Engineers and Data
Scientists

Data Scientists and ML
Engineers

ML
Engineers



Usually takes from weeks to months
primarily solving for the prioritized use cases

Challenges analysts and builders face



**Lack deep
ML expertise, and learning
curve is steep**



**Business needs
explainability and
validation from experts**



**Available no-code ML tools
tend to lack transparency
and have upfront fees**

What's the solution?



How Can You Scale ML value creation?

1

Expand Your ML Development Team

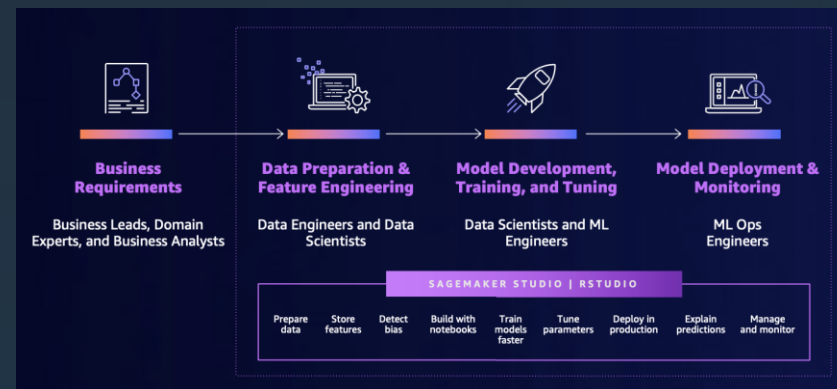
Grow your technical teams in proportion of your needs, **but** ML talent is in high demand

More than 50% hiring growth for AI and ML expertise, faster than any other emerging job role

2

Enhance ML Team Productivity

Leverage low-code / no-code tools that make data science teams more productive



3

Democratize ML Innovation

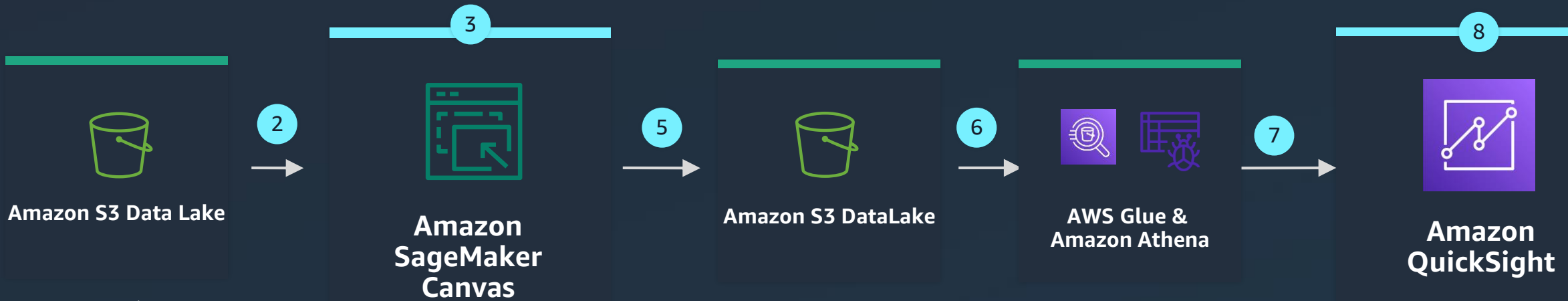
Enable more groups of people, including business analysts to build ML models

Empower **business analysts to make smarter decisions with no-code machine learning** with a dedicated easy-to-use workspace

AWS no-code services



No-code visual DAML for builders



- 1 Create Amazon S3 data lake & improve data quality with AWS Glue DataBrew (Optional)
- 2 Import data from Amazon S3 data lake to Amazon SageMaker Canvas
- 3 Create ML model without writing code and do batch inferencing with Amazon SageMaker Canvas
- 4 Optionally, export/import model to Amazon SageMaker Studio for improvement
- 5 Upload results of prediction on Amazon S3 Data Lake
- 6 Crawl data using AWS Glue and build AWS Glue DataBrew
- 7 Query data using Amazon Athena from Amazon QuickSight
- 8 Visualize BI with Amazon QuickSight

Use Amazon SageMaker Canvas to prepare data for ML modeling and generate ML predictions



Can quickly **connect to and access data** from disparate sources



Leverages powerful AutoML technology to automatically **train and build models** based on your dataset



Identifies the best model based on your dataset to **generate single or bulk predictions**



Integrates with Amazon SageMaker Studio, making it easy to **share models** with data scientists



Usage-based pricing to avoid licensing fees and reduce TCO

Amazon QuickSight BI dashboarding



Unified BI for all needs

Interactive dashboards, Q, embedded analytics, and paginated reports from the same source of truth



Insights anywhere

Embed easily with extensive APIs, look-n-feel customizations for seamless data experiences in any app or portal



Augmented analytics

Ask questions in natural language with Q—explore forecasts, anomalies, narratives with built-in ML



Auto-scaling

Scale effortlessly to 100k's of users with no servers to manage; scale to 1B+ row datasets with SPICE in-memory data engine



Policy based governance, security

Share securely with row & column-level security, role-based access control, with automated user provisioning



Get more with less

Reduce costs with pay-per-use pricing—no long-term contracts or hidden costs for scaling

Over 100,000 customers use Amazon QuickSight*



Amazon SageMaker Canvas & Amazon QuickSight use cases

Vast array of use cases across different business functions, or verticals



Sales and marketing

1. Sales conversion
2. Sales forecasting
3. Propensity to churn
4. Customer lifetime value prediction
5. Marketing mix modeling



Finance and accounting

1. Credit risk scoring
2. Delayed payments prediction
3. Fraud detection
4. Portfolio optimization
5. Account payables automation



Operations and logistics

1. Demand forecasting
2. Inventory planning and scheduling
3. Delivery time forecasting
4. Predictive Maintenance

and many more...

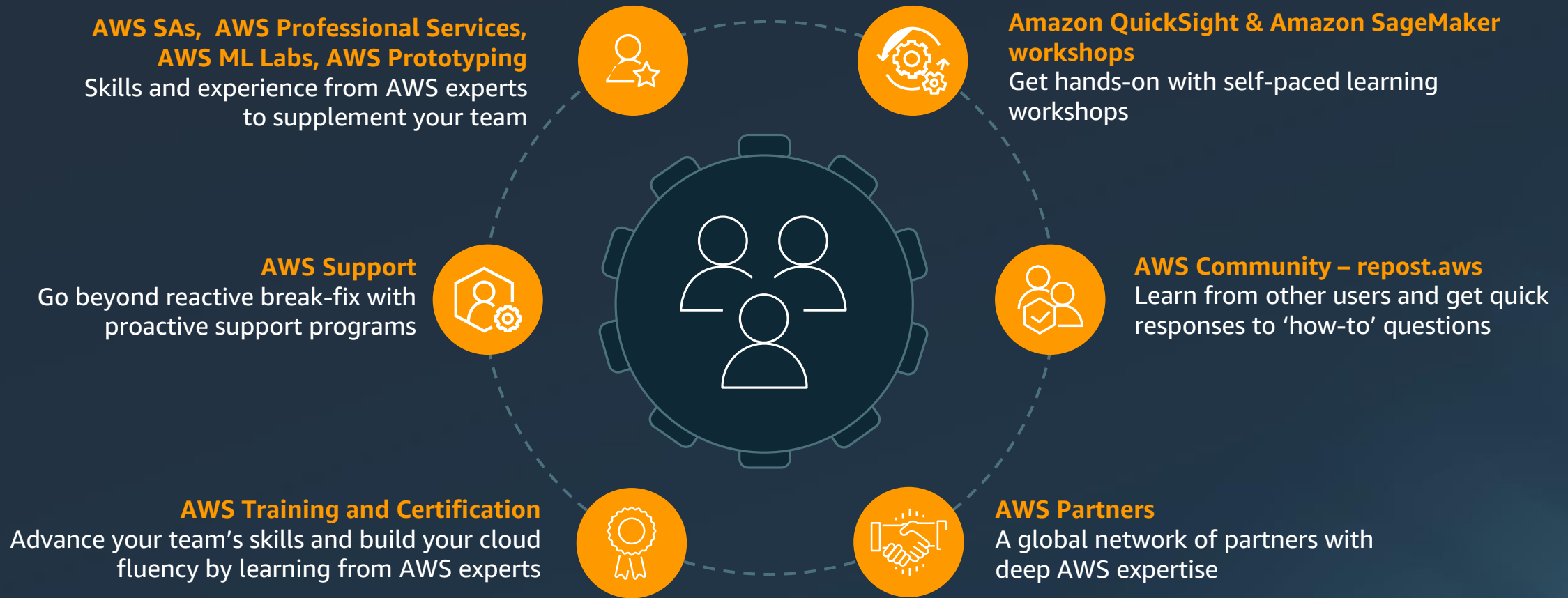
Demo – Loan payment prediction

Multi-class classification

Demo walkthrough



We are here to help you transform your DAML platform



*Subject to qualification criteria



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Getting started with AWS

- Amazon SageMaker Canvas Workshop - <https://catalog.us-east-1.prod.workshops.aws/workshops/80ba0ea5-7cf9-4b8c-9d3f-1cd988b6c071/en-US>
- Amazon SageMaker Canvas documentation - <https://docs.aws.amazon.com/sagemaker/latest/dg/canvas.html>
- Amazon QuickSight Workshop - <https://catalog.workshops.aws/quicksight/en-US>
- AWS Glue DataBrew Workshops - <https://catalog.us-east-1.prod.workshops.aws/workshops/>
- AWS Serverless Data Lake Workshop - <https://catalog.us-east-1.prod.workshops.aws/workshops/ea7ddf16-5e0a-4ec7-b54e-5cadf3028b78/en-US>

Visit the Data & AI/ML resource hub

Dive deeper into these resources, get inspired and learn how you can use AI and machine learning to accelerate your business outcomes.

- 6 steps to machine learning success e-book
- 7 leading machine learning use cases e-book
- Machine learning at scale e-book
- Achieving transformative business results with machine learning e-book
- Tackling our world's hardest problems with machine learning e-book
- Accelerating machine learning innovation through security e-book
- ... and more!



<https://bitly.co/FqdC>

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- Learn how to apply machine learning, artificial intelligence, and deep learning to unlock new insights and value in your role
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twitch.tv/aws

Thank you!

