



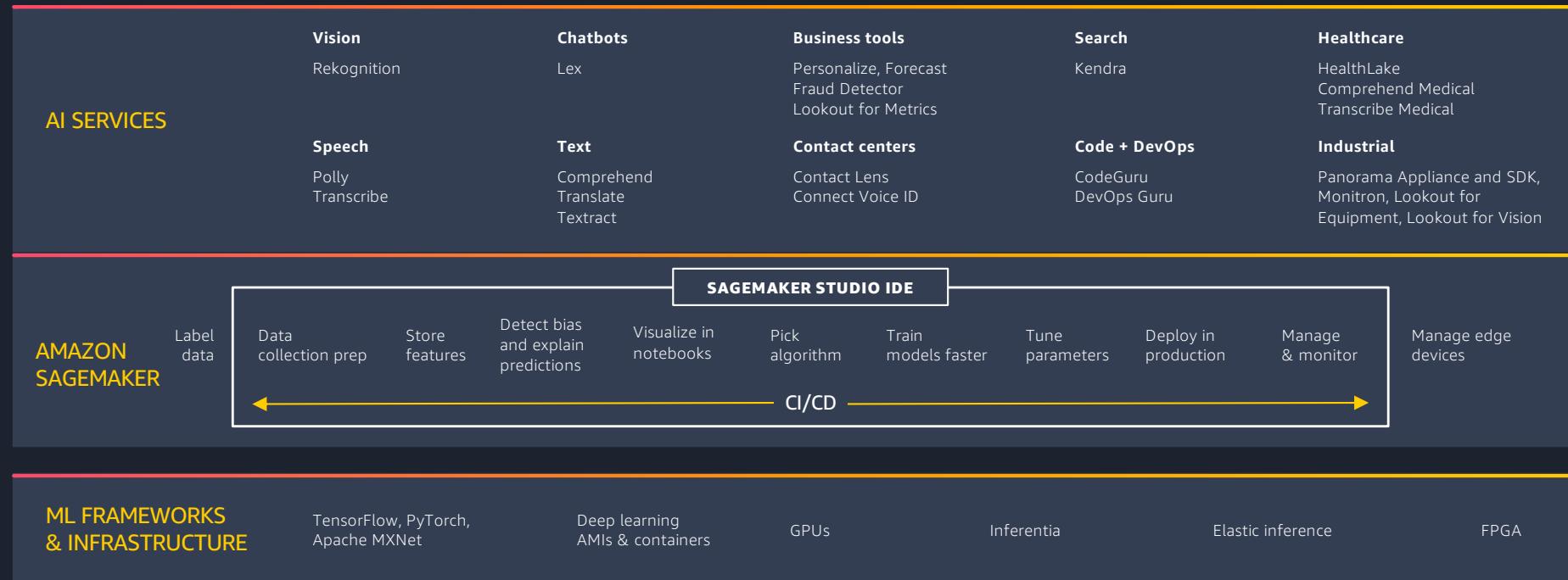
# Amazon SageMaker

Machine learning for every data scientist and developer

David Roberts, July 20 2021

# The AWS ML stack

Broadest and most complete set of machine learning capabilities



# State of machine learning



## INCREASED SPENDING

By 2024, global spending on artificial intelligence will reach \$110 billion

—IDC



## FROM PILOTING TO OPERATIONALIZING

By the end of 2024, 75% of enterprises will shift from piloting to operationalizing AI

—Gartner



## ML HANDLES REAL-WORLD TASKS

Driven by advancements in GPUs and compute, availability of data, new algorithms and the cloud

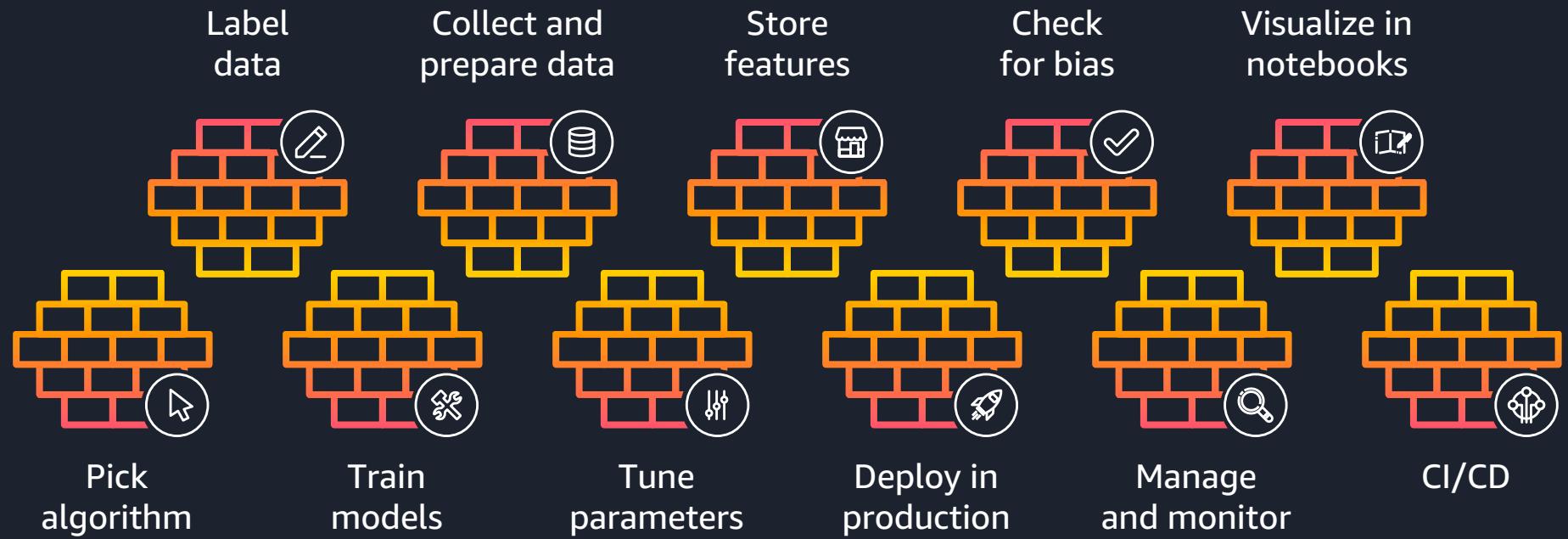


## INTEGRATING ML INTO DEVOPS

ML is now part of mainstream DevOps process, not a set of specialized, isolated projects

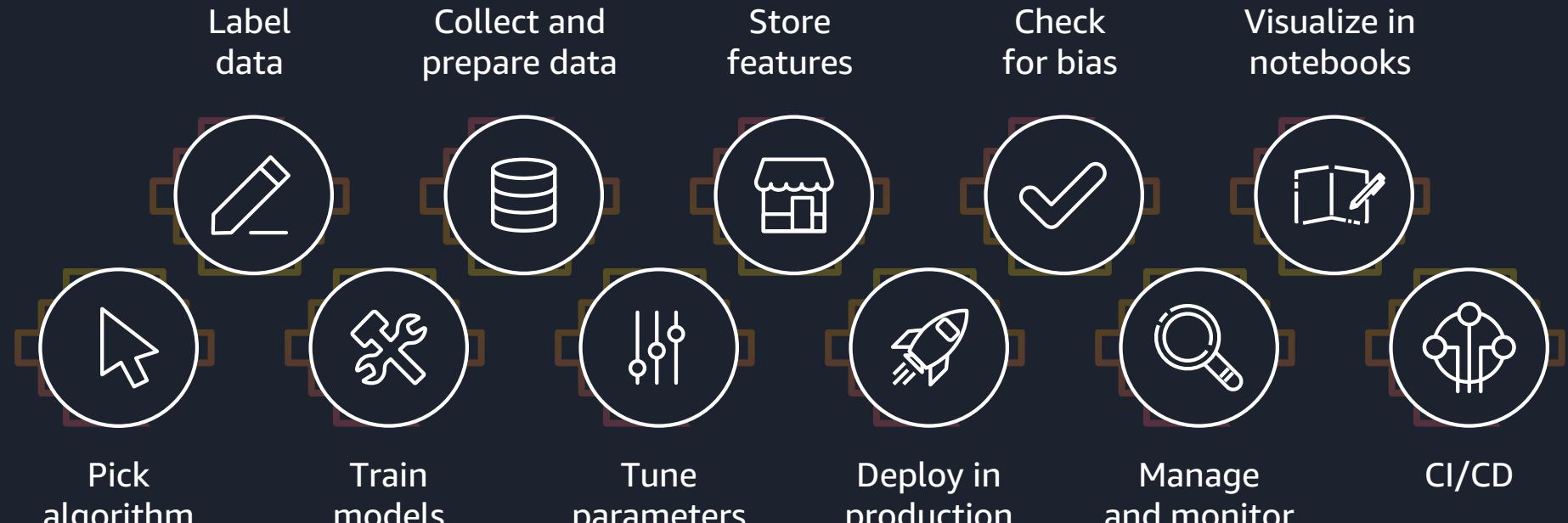
—Gartner

# Machine learning development is complex and costly



# Amazon SageMaker: Built to make ML **more accessible**

## SageMaker Studio IDE



## MODEL MANAGEMENT FOR EDGE DEVICES

## Integrated Workbench

Capabilities designed specifically for ML, data preparation, experiment management, and workflows

## Managed Infrastructure

Designed for ultra low latency and high throughput, automatic scaling, and distributed training

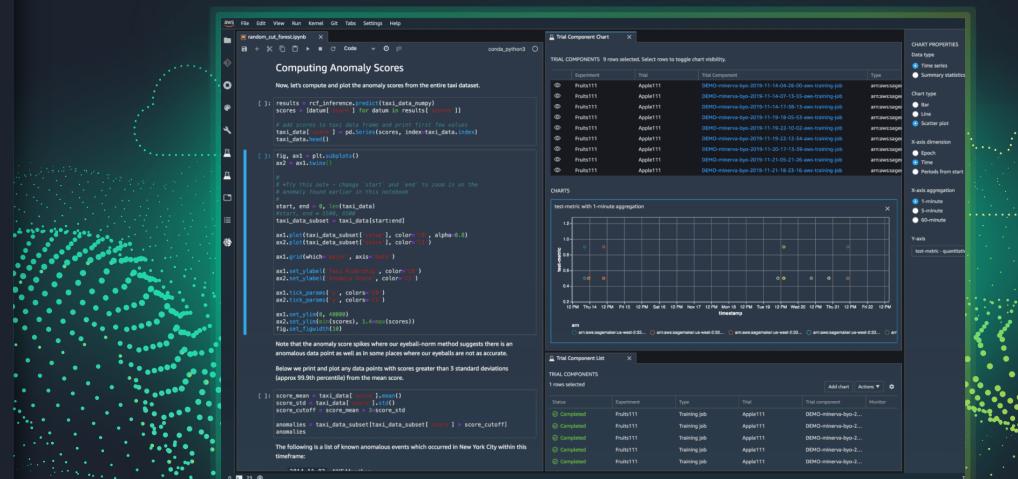
## Managed Tooling

Purpose-built from the ground up to work together including auto ML, collaboration, debugger, profiler, bias analyzer, and explainability

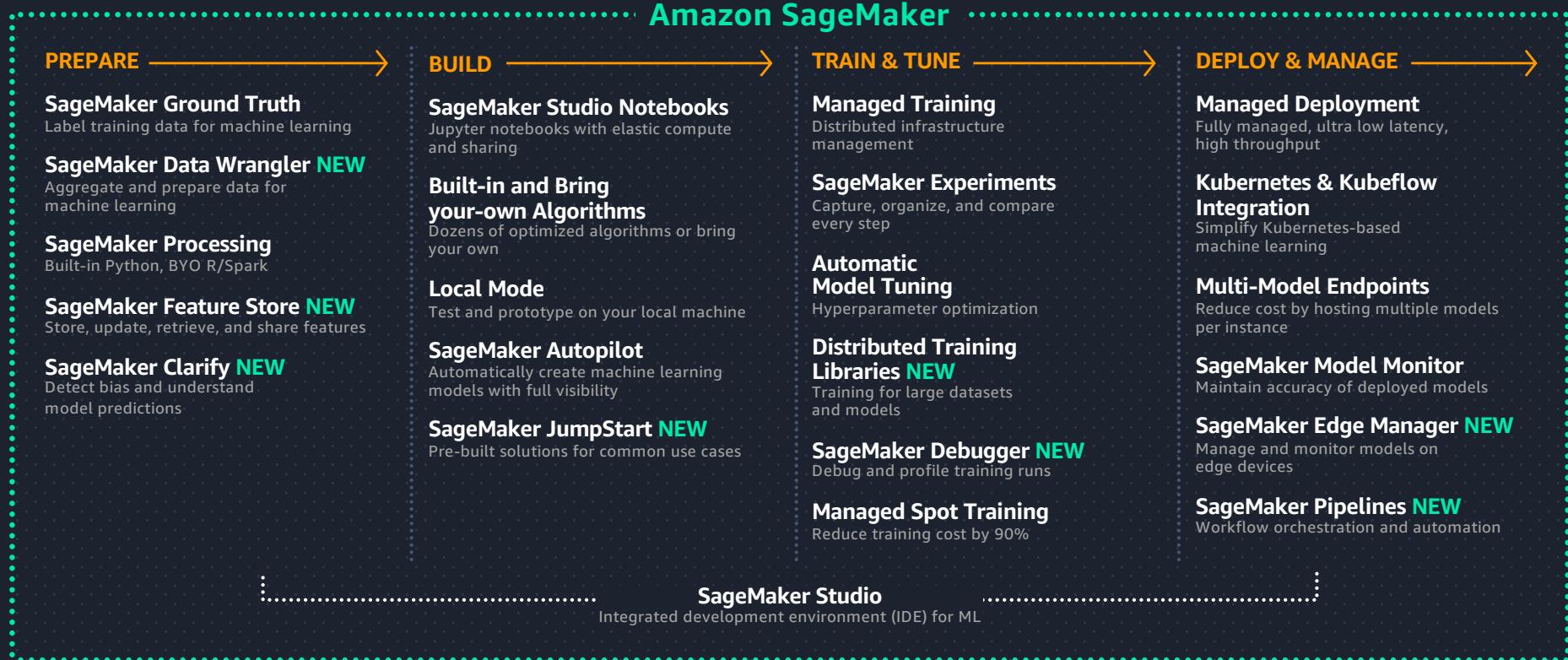
<https://aws.amazon.com/sagemaker>

## Amazon SageMaker

Most complete, end-to-end ML service



# Amazon SageMaker overview



## SageMaker Studio

Integrated development environment (IDE) for ML

# Amazon SageMaker key benefits

Most complete,  
end-to-end ML service



## Accelerate ML development

20+ tools covering the entire ML development lifecycle

## Boost data scientist productivity

The world's first integrated development environment (IDE)

## Reduce cost

Eliminate costs of writing custom integration code with integrated functionality optimized for ML

# Balancing ML agility with IT governance

## ML Builders



Focus on unique business value  
Self-service access  
Experiment fast  
Respond quickly to change

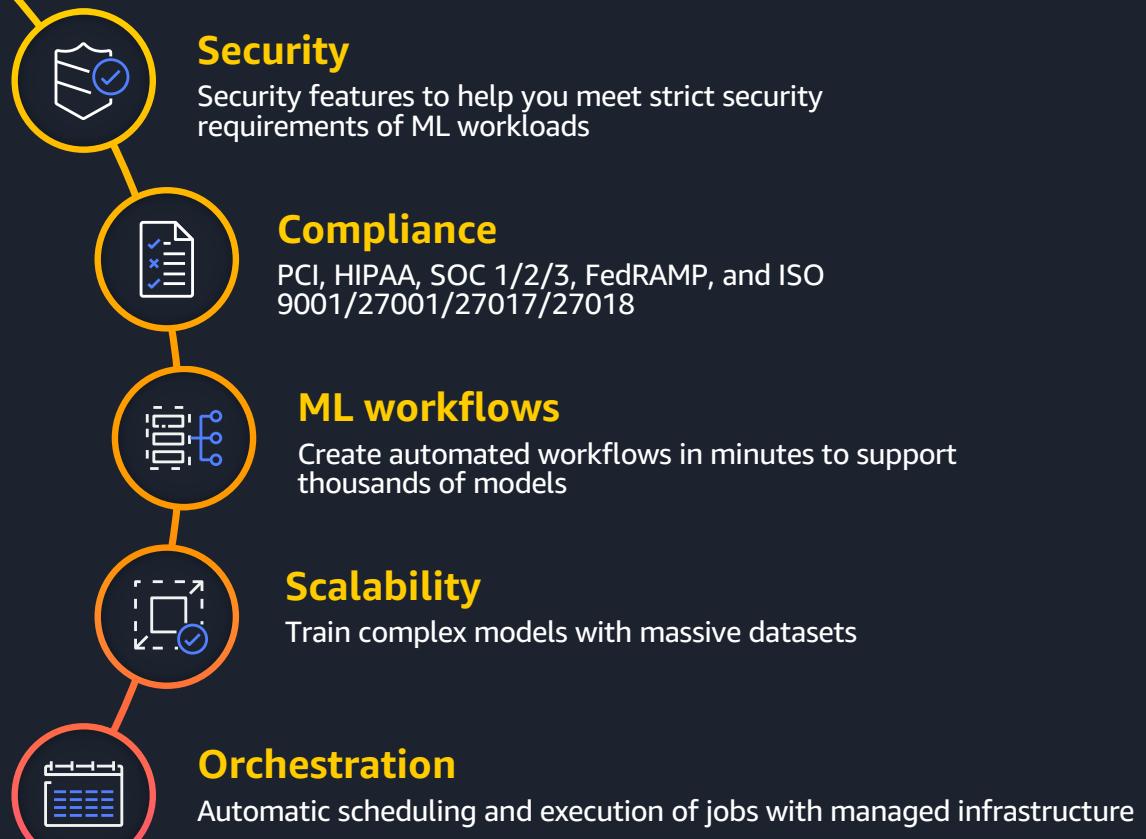
## Cloud IT and DevOps



Security  
Compliance  
Operations  
Spend management

# Amazon SageMaker

is devops ready



# Tens of thousands of customers use **Amazon SageMaker**



# lyft Level 5

Lyft, one of the largest transportation networks in the United States and Canada, launched its Level 5 autonomous vehicle (AV) division in 2017 to develop a self-driving system to help millions of riders.



Using Amazon SageMaker distributed training, we reduced our model training time from days to couple of hours. By standardizing machine learning workloads on AWS, we streamlined our development cycles and reduced costs, ultimately accelerating our mission to deliver self-driving capabilities to our customers."

Alex Bain,  
Lead for ML Systems at Lyft Level 5

## PROBLEM

3TB+ data, 1,500+ hours play time per week  
Needed ML solution for real-time stats  
Lean team, no data science expertise

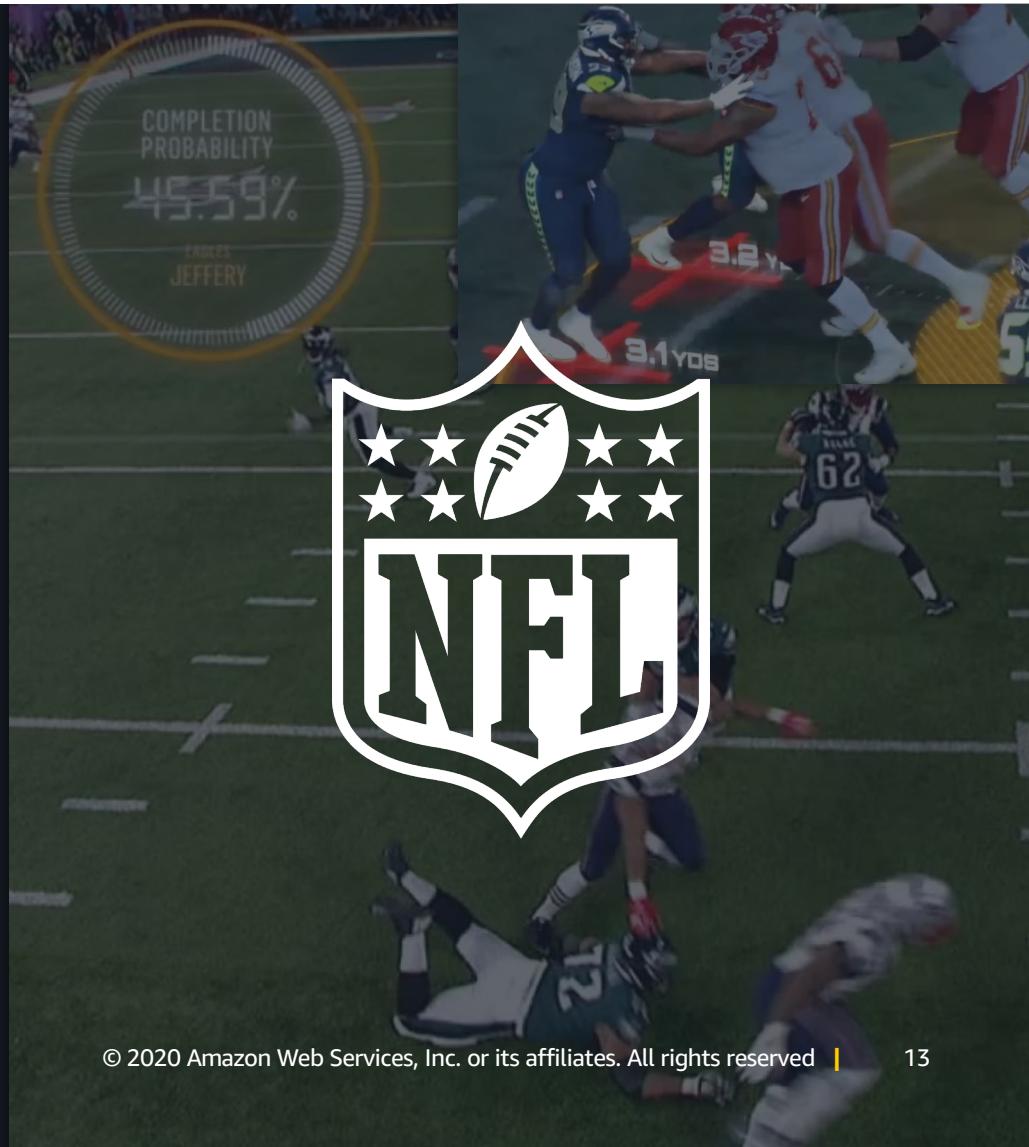
## SOLUTION

### Next Gen Stats (NGS)

Live data streamed to AWS from  
RFID tags on players and in game ball  
Data processed in 100+ steps in under 1 second  
Real-time predictions  
Output stats published via  
APIs and on-screen graphics

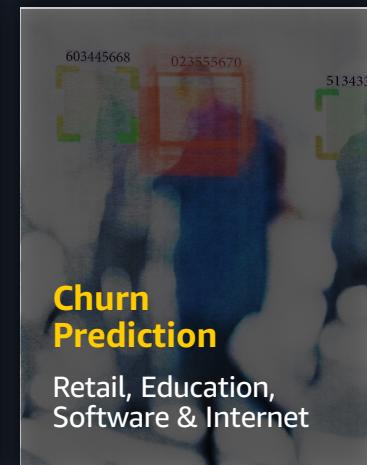
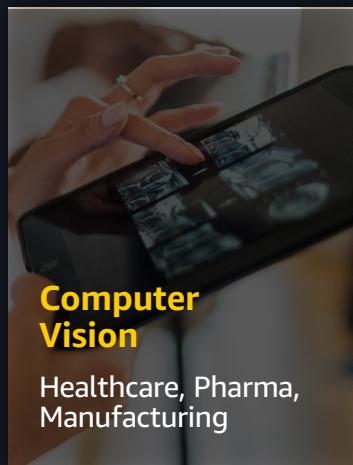
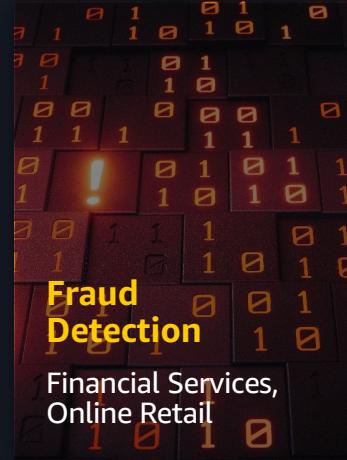
## IMPACT

Quickly launched 20+ stats  
Sports announcers get interesting  
data points to engage fans



# SageMaker

## Common use cases



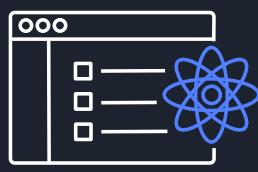
# Amazon SageMaker

## Getting started



### Tutorials and samples

Example notebooks and documentation



### Onboard through SageMaker Studio

End-to-end prebuilt solutions, all within Studio



### Individual & Team Training & Certs

Online and customized Immersion Days



### Tailored Programs & Workshops

POC Design Workshops  
ML Solutions Lab



### AWS ProServe & Partners

Dozens of certified ML partners, worldwide