



# aws SUMMIT

INDIA | MAY 25, 2023

GS AWS 002

# A guide to starting your AI & ML journey on AWS - Choosing the right services from the ML stack

Ayush Agrawal  
Startup Solutions Architect  
AWS India

Supreeth S Angadi  
Startup Solutions Architect  
AWS India



# The reach of ML is growing

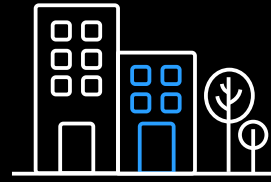


## INCREASED SPENDING

By 2026, global spending on artificial intelligence will reach \$300 billion growing 4.2 faster than average IT spend

**IDC**

"IDC Press Release, Worldwide Spending on AI-Centric Systems Will Pass \$300 Billion by 2026, According to IDC, September 2022,"  
<https://www.idc.com/getdoc.jsp?containerId=prUS49670322>

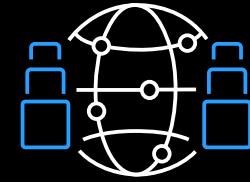


## AI ACROSS SEVERAL BUSINESS UNITS

Gartner survey reveals 80% of executives think automation can be applied to any business decision

**Gartner**

Gartner, Press Release  
<https://bit.ly/3is16a2>



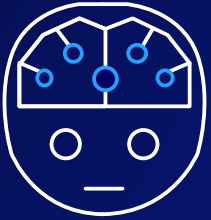
## AI IS CRITICAL TO SUCCESS

94% of business leaders surveyed say AI is critical to their success

**Deloitte**

Deloitte, "State of AI in the Enterprise,"  
<https://bit.ly/3XiNOLR>

# What is it?



## Artificial intelligence (AI)

Any technique that enables computers to mimic human intelligence using logic, if-then statements, and machine learning



## Machine learning (ML)

A subset of AI that uses machines to search for patterns in data to build logic models automatically



## Deep learning (DL)

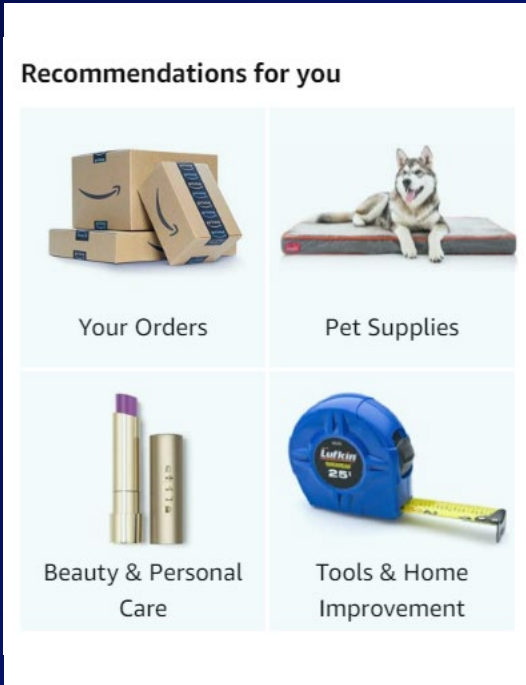
A subset of ML composed of deeply multi-layered neural networks that perform tasks like speech and image recognition



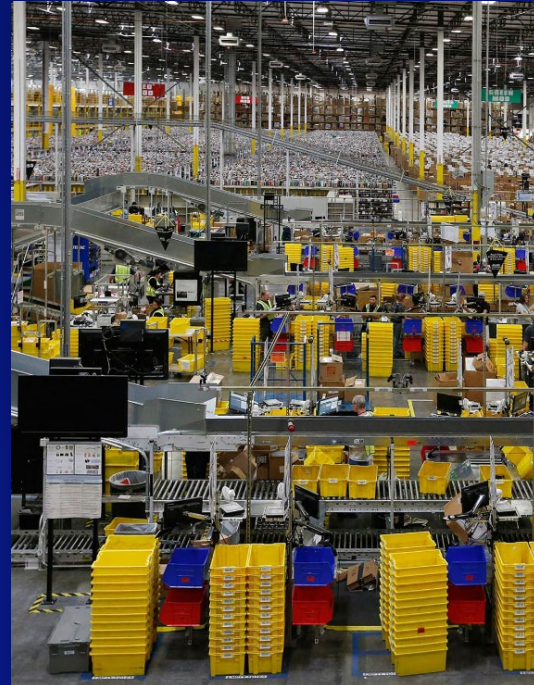
## Reinforcement learning (RL)

Reinforcement learning trains models by using a reward function of a desired outcome

# Amazon machine learning innovation at scale



**4,000 products  
per minute** sold  
on Amazon.com



**1.6 million packages**  
every day



**Billions** of Alexa  
interactions  
each week



First Prime Air  
delivery on  
**December 7, 2016**





**Enhance  
customer  
experience**



**Better and faster  
decision-making**

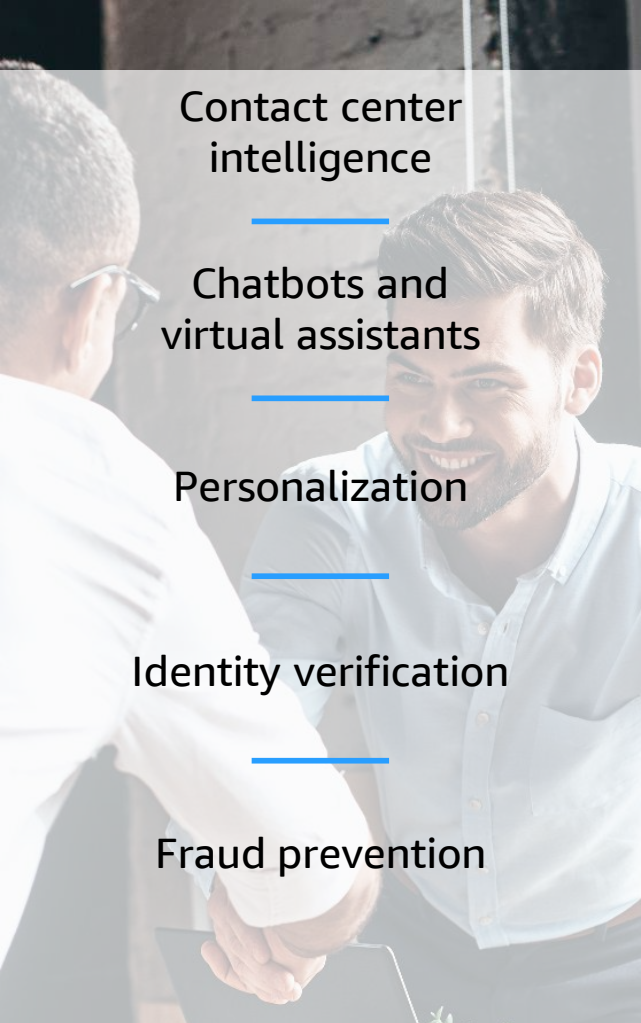


**Improve business  
operations**



**New products  
and services**





Contact center  
intelligence

---

Chatbots and  
virtual assistants

---

Personalization

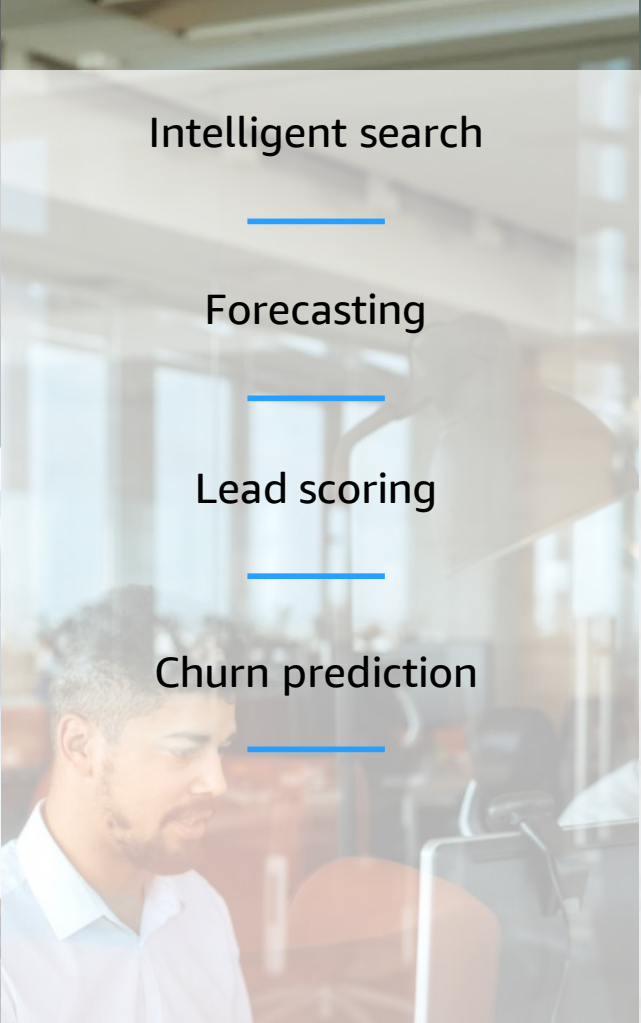
---

Identity verification

---

Fraud prevention

**Enhance  
customer  
experience**



Intelligent search

---

Forecasting

---

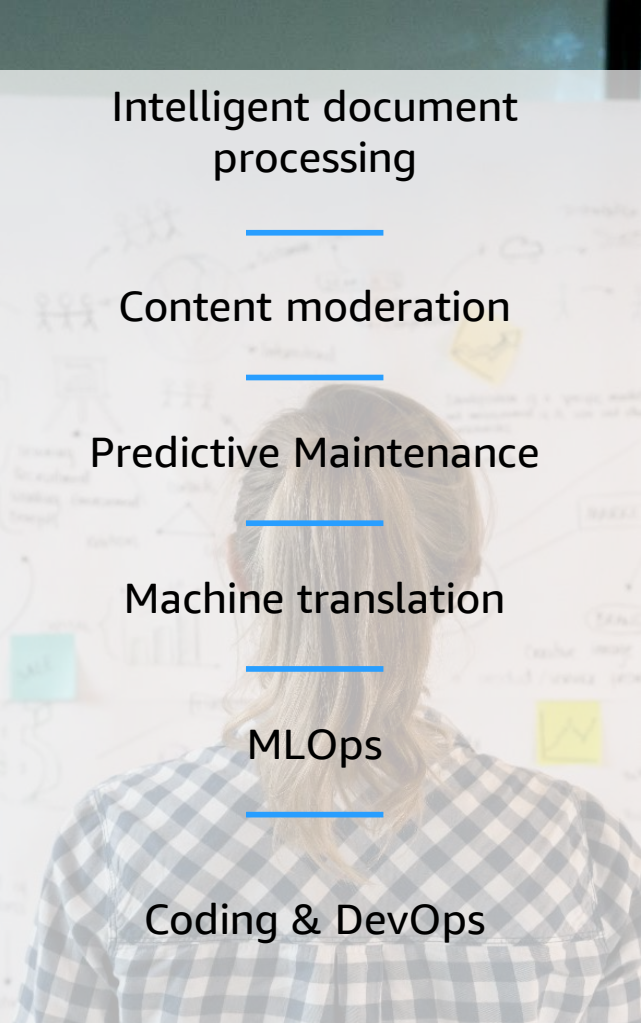
Lead scoring

---

Churn prediction

---

**Better and faster  
decision-making**



Intelligent document  
processing

---

Content moderation

---

Predictive Maintenance

---

Machine translation

---

MLOps

---

Coding & DevOps

**Improve business  
operations**

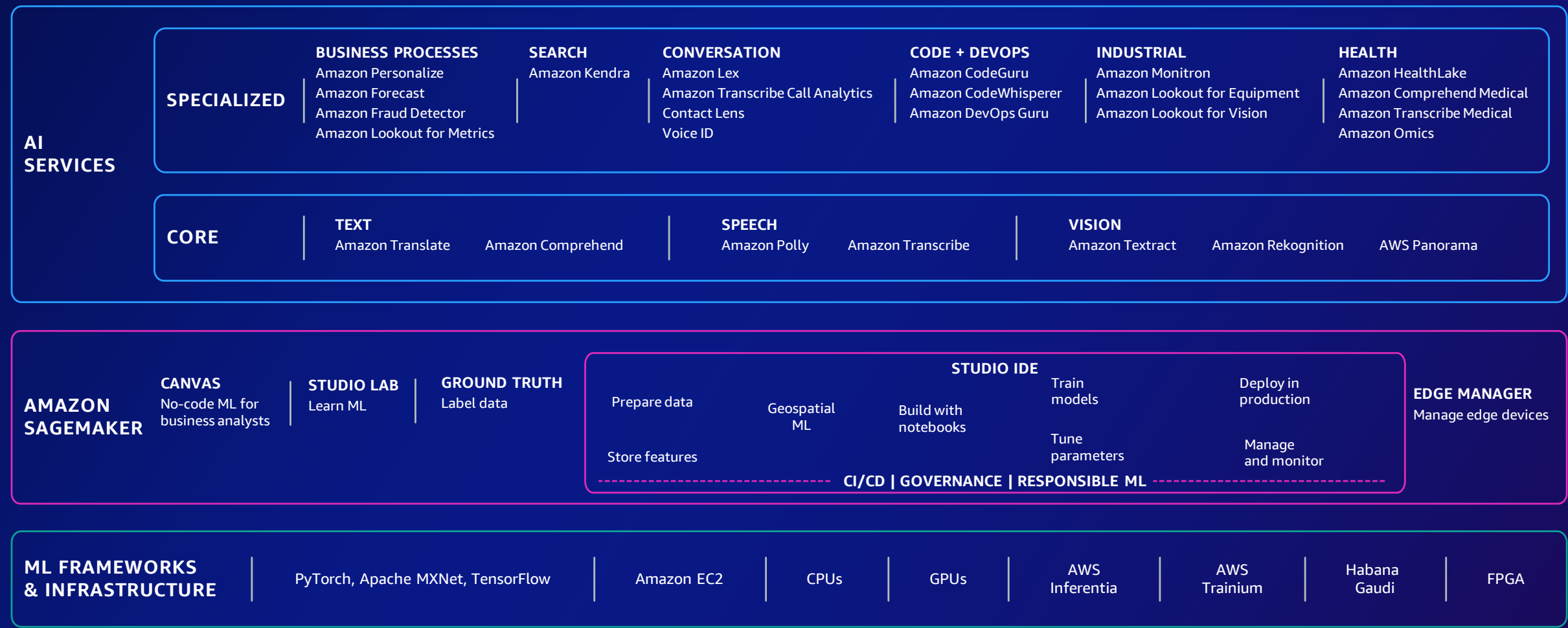


New use cases

**New products  
and services**

# The AWS AI/ML stack

BROADEST AND MOST COMPLETE SET OF MACHINE LEARNING CAPABILITIES





# Generative AI is transforming AI

IMAGE GENERATION, TRANSFORMATION, UPSCALING



Generated by Stable Diffusion 2.0. This interior does not exist

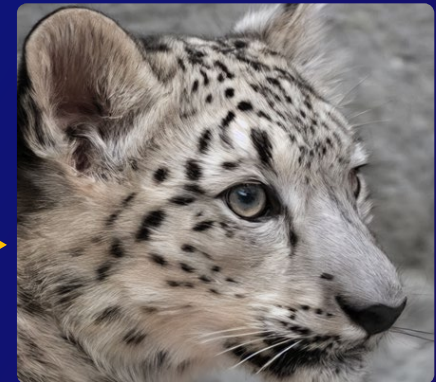


Seamless transformation

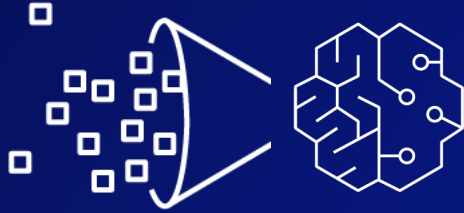


4x

Upscaling



# Generative AI



Powered by foundation models pre-trained on large sets of data with billions of parameters



Tasks can be customized for specific domains with minimal fine-tuning. Applicable to many use cases like text summarization, question answering, digital art creation, etc.



Reduces time to develop ML models and innovate

AI21labs

Light<sup>on</sup>  
AI for all, everywhere



co:here



alexa

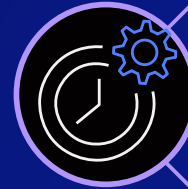
# SageMaker JumpStart

Easily access ML assets and quickly bring ML applications to market



## Machine Learning Hub for SageMaker

Browse through ~400 contents including, built-in algorithms with pre-trained models, (New) Foundation Models, solution templates, and example notebooks



## Pre-built training and inference scripts

Compatible with SageMaker and configurable with custom dataset



## UI as well as API based machine learning

Use UI for single click model deployment or API for Python SDK based workflow



## Notebook with examples

JumpStart lets you jump into notebook to use selected model with examples to guide customers through entire ML workflow



## (New) Share and collaborate within an organization

Share models and notebooks with others within your organization, and allow them to train with their own data or deploy as-is for inferencing



# Replace with Demo Video

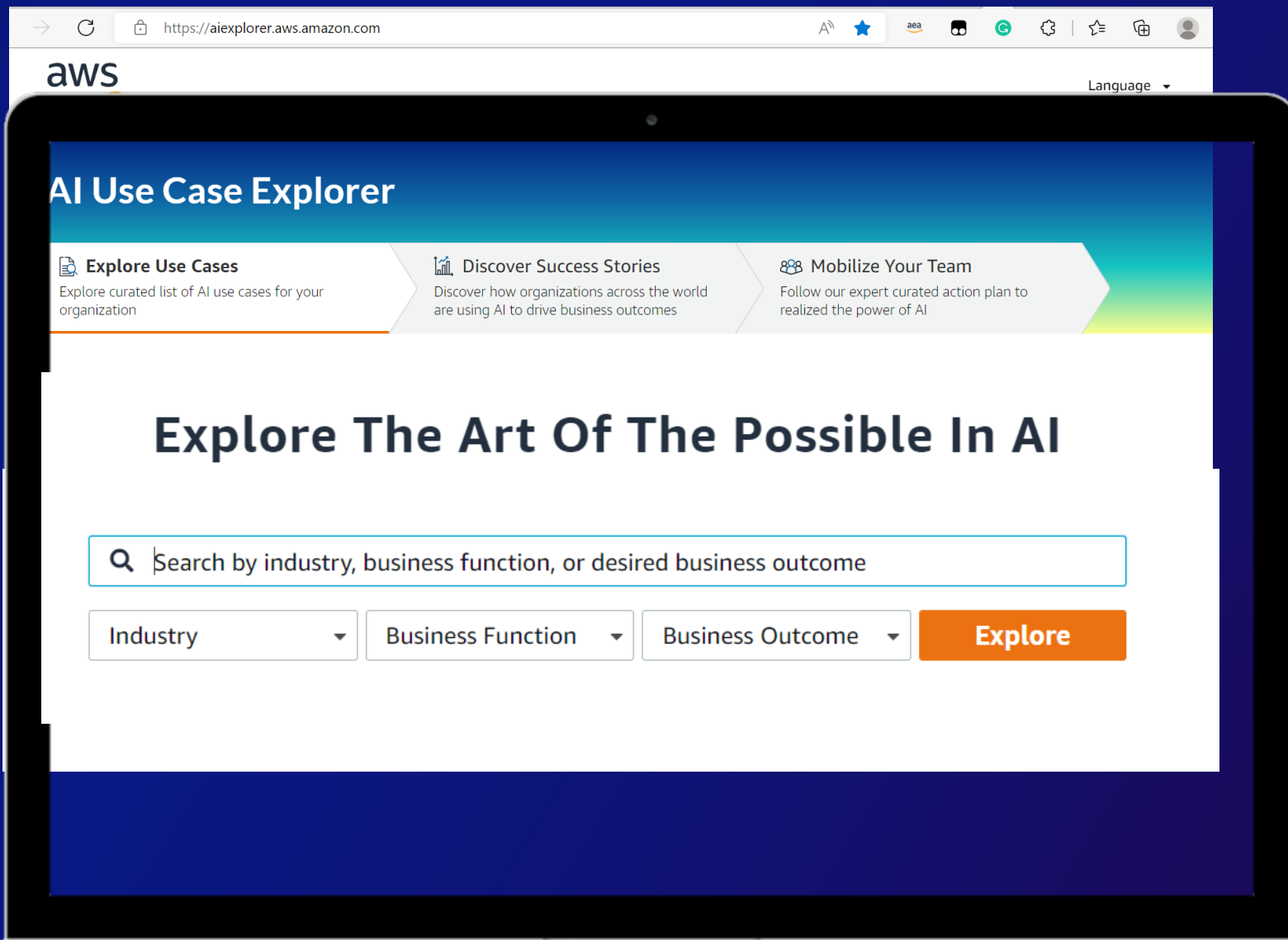
NEW!



# AI Use Case Explorer

Easily find the most relevant AI use cases with related content and guidance to make them real

aiexplorer.aws.amazon.com



# 100,000+ customers use AWS for machine learning



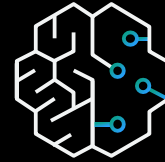


# With the growth of AI comes the recognition that we must all use it responsibly

**Our commitment to develop AI and machine learning in a responsible way is integral to our approach**



Transform responsible AI from theory to practice



Integrate responsible AI into the end-to-end ML lifecycle



Nurture and educate a more diverse generation of leaders in ML



Advance the science behind responsible AI

# Next steps



## TRAINING

In-person, online and  
certification programs  
AWS deep dives



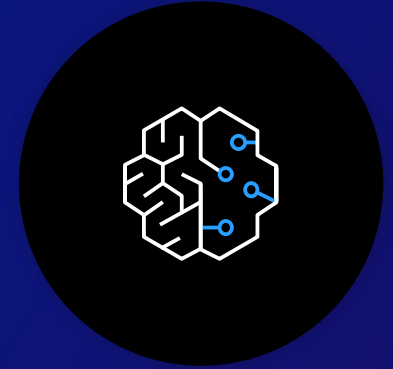
## IDEATION AND PROOF OF CONCEPT

ML Solutions Lab  
AWS ML  
Embark Program



## AI SERVICES, NO ML SKILLS REQUIRED

Leverage our AI services to  
add AI capabilities to your  
business applications



## BUILD YOUR OWN MODEL

Build your own model  
using SageMaker or  
SageMaker Canvas

skillbuilder.aws 

# **Your time is now**

Build in-demand cloud skills *your way*



© 2023, Amazon Web Services, Inc. or its affiliates. All rights reserved.



# Thank you!

Ayush Agrawal  
Startup Solutions Architect  
AWS India

Supreeth S Angadi  
Startup Solutions Architect  
AWS India



Please complete the  
session survey