# Use case 1 : Cohere Generate Model |Test-Content generation, AI Text,summary..

Requirement : Here you will use marketplace model “Cohere”, **Amazon SageMaker** to Build, train, and deploy ML **model “**Cohere**”.**

**Use case** Utilize Cohere's Generate **model** to invigorate your copywriting, named entity recognition, paraphrasing, or summarization efforts and take them to the next level

* Categories : Text Generation, Generative AI, Content Generation, AI Text Writer, Copy Writing, Summarization, Summary Generator, Entity Extraction
* **Cohere's** Command is a generative model that responds well with instruction-like prompts.

## Step 1. Search cohere FM

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## Step2. Create an SageMaker domain to use Studio and Studio notebooks

* This is one time job before using SageMaker
* Use SageMaker studio & notebook

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A close-up of a white background

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A screenshot of a login page

Description automatically generated A logo for a software company

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**SageMake Studio Output**

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## Step3. Create Endpoint

* Model setting
* Container definition X
* Network
  + VPC (optional)
* Endpoint Name

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**Chohere Generate Model – Command**

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# Use case 2 : Stable Diffusion XL |Text to Image or vice-versa

Requirement : Here you will use opensource model “Stable Diffusion”, **Amazon SageMaker** to Build, train, and deploy ML **model “**Stable Diffusion XL**”.**

**Use case** Utilize stable Diffusion XL is the image generation model that is tailored towards more photorealistic outputs with more detailed imagery and composition compared to previous

Welcome to [Amazon SageMaker Jumpstart](https://docs.aws.amazon.com/sagemaker/latest/dg/studio-jumpstart.html)! You can use Amazon SageMaker Jumpstart to solve many Machine Learning tasks through one-click in SageMaker Studio, or through [SageMaker Python SDK](https://sagemaker.readthedocs.io/en/stable/overview.html#use-prebuilt-models-with-sagemaker-jumpstart).

In this demo notebook, we demonstrate how to use the SageMaker Python SDK to deploy Stable Diffusion models for image generation task. The container being utilized here is a customized stabilityai container that has been optimized to excel in terms of both speed and quality. We demonstrate how to use SageMaker Python SDK for Text-to-Image and Image-to-Image generation. Text-to-Image is the task of generating realistic image given any text input. Here, we show how to use state-of-the-art pre-trained Stable Diffusion models for generating image from text and image.

# Amazon BedRock

Amazon **Bedrock** is a fully managed service that **makes** foundation models (FMs) from Amazon and leading artificial intelligence (AI) startups available through an API.

* Explore how to use Amazon Bedrock for your generative AI application.
* Amazon Bedrock helps you integrate generative AI into your workloads at Amazon.
* Choose from Various FM :You can choose FMs from Amazon, AI21 Labs, Anthropic, Cohere, Meta, and Stability AI to find the right FM for your use case. This includes Amazon Titan, Jurassic-2, Claude, Command, Llama 2, and Stable Diffusion families of FMs that support different modalities, including text, embeddings, and multimodal.
* Access FMs through a single FM :You can use a single API to securely access customized FMs and those provided by Amazon and other AI companies. Using the same API, you can privately and more efficiently pass prompts and responses between the user and the FM.

## Which of the following problems does Amazon Bedrock solve?

* Customers want access to multiple models so they can choose the model that best fits their needs.
* Customers want the models fine-tuned with their data to be private.
* Customers do not want to manage their infrastructure.

## How can you use Amazon Bedrock to architect a generative AI application

The following architecture illustrates a **cloud-based chatbot solution** powered by generative AI and customer data. This solution has the capability to converse with you in **natural language** while maintaining accuracy by including customer data.

A diagram of a software company

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## BedRock usecase

A page of a paper with text

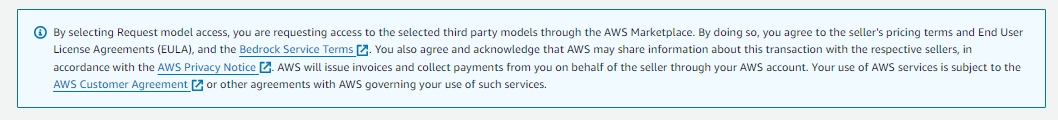
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## Demo:Text playground using Bedrock

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# Generative AI echo system

A table with text and words

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# What SageMaker does?

**Amazon SageMaker** : Build, train, and deploy machine learning **models** at scale

* The quickest and easiest way to get ML **models** from idea to production.

# What is use of Amazon SageMaker Domain ?

To have access to most Amazon SageMaker environments and resources, you must complete the Amazon SageMaker Domain onboarding process using the SageMaker console or the AWS CLI

An Amazon SageMaker Domain consists of the following:

* An associated Amazon **EFS** volume
* A list of authorized **users**
* A variety of security, application, policy, and Amazon Virtual Private Cloud (Amazon VPC) configurations

Troubleshoot

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