

## AWS(AMAZON WEB SERVICES)

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## **What is AWS(Amazon Web Services?)**

Databases, storage options, and processing capacity are just a few of the services that Amazon offers on its all-inclusive cloud computing platform, Amazon Web Services (AWS). Pay-as-you-go pricing, flexible scalability, and speedy application development and deployment are all made possible for enterprises by it. Businesses of different sizes utilize AWS for a variety of tasks, from managing sophisticated machine learning algorithms to hosting websites.

Some of the useful tools that come handy while deploying a machine learning model in aws are as follows:

- 1.Amazon Sagemaker: It's a service useful to deploy models with ease which provides inbuilt algorithms and have functionality of building and training models and also provides support for popular frameworks.
- 2.Amazon Rekognition: It's a image and video analysis service that have a support for deep learning to identify objects, peoples, text in image and video.
- 3.Amazon Comprehend: It's a NLP(Natural language processing) service that can extract key phrases, sentiment, entities and language from the text data enable task like sentiment analysis.
- 4.Amazon Polly: A service that supports text to speech conversion and allow the speech to be natural sounding.
- 5.AWS Deep learning AMI (Amazon Machine Images): It is pre-configured with deep learning frameworks like Tensorflow, Pytorch making it easy to set up environments for training deep learning models.
- 6.Amazon Forecast: A service for time-series forecasting which uses machine learning to deliver accurate predictions on basis of historical data.
- 7.Aws DeepLens: A service with video camera that can run deep learning models locally for applications like object detection and recognition.

Here are some of the pros and cons of aws:

### **Pros:**

- 1.Scalable: Aws offers scalable solutions, making business decisions flexible and resources available on demand.

2.Complete packages: Aws provides surprising packages and services for cloud-computing,storage,databases and machine learning.

### **Cons:**

1.Complexity:With the extensive range of services aws provides it also make the navigation complex and not easy to maintain especially for begginers.

2.Cost Management: Aws Provide pay-as-you-go model ,where managing cost can be challenging and unexpected expenses may occur if resources are are not managed properly.

Overall,There are many services rather than this aws provides it's hard to deep dive into all and describe them but aws is a better platform for deploying model also it is expensive form the cost perspective. However,management of resources efficiently can control the expense.

For more information visit Faq: <https://aws.amazon.com/free/free-tier-faqs/?p=ft&z=subnav&loc=5&refid=e747cc26-a307-4ae0-981a-6dc5c1cb4121>

Here are some free tiers for machine learing in aws where deployment can be possible:

[https://aws.amazon.com/free/?all-free-tier.sort-by=item.additionalFields.SortRank&all-free-tier.sort-order=asc&awsf.Free%20Tier%20Types=\\*all&awsf.Free%20Tier%20Categories=categories%23ai-ml](https://aws.amazon.com/free/?all-free-tier.sort-by=item.additionalFields.SortRank&all-free-tier.sort-order=asc&awsf.Free%20Tier%20Types=*all&awsf.Free%20Tier%20Categories=categories%23ai-ml)

The screenshot displays the AWS Free Tier page. At the top, the AWS logo is on the left, and navigation links (About AWS, Contact Us, Support, English, My Account, Sign In) and a 'Create an AWS Account' button are on the right. Below the navigation bar, a secondary menu includes 'Products', 'Solutions', 'Pricing', 'Documentation', 'Learn', 'Partner Network', 'AWS Marketplace', 'Customer Enablement', 'Events', 'Explore More', and a search icon. The main heading is 'AWS Free Tier', followed by links for 'Overview', 'Free Tier Categories', 'How to Create an Account', 'Featured Offers for Business', 'FAQs', and 'Terms and Conditions'. The 'Free Tier details' section features a 'Filter by:' dropdown with 'Clear all filters' and two filter categories: 'Tier Type' (with options: Featured, 12 Months Free, Always Free, Trials) and 'Product Categories' (with options: Analytics, Application Integration, Artificial Intelligence, Business Productivity, Compute, Containers). The main content area shows three product cards: 1. 'MACHINE LEARNING' (NEW) for 'Amazon SageMaker' with a 'Free Tier' of '2 Months' (250 hours per month of ml.t3.medium on free trial). 2. 'ML/AI' for 'Amazon Comprehend' with a 'Free Tier' of '50 K' (50,000 units of text (5M characters) for each API per month, 12 MONTHS FREE). 3. 'MACHINE LEARNING' for 'Amazon Comprehend Medical' with a 'Free Tier' of '8.5 Million' (8.5 million characters, FREE TRIAL). Each card includes a brief description and a 'Learn more' link.