

Deploying a Machine Learning on AWS

Abstract:

Amazon Machine Learning (ML) algorithm discovers pattern and data and constructs the mathematical model using this data. These models are used to make predictions in new data. Machine Learning can be implemented in an ample number of applications. AWS Machine Learning helps the user to quickly build smart applications that can help to perform important tasks such as fraud detection, demand forecasting, predictive customer support, and quick prediction.

Amazon Machine Learning synchronizes the previous data and utilizes it further to provide the necessary information to the user. Amazon ML is used to review customer feedback in email, product reviews, forum, and phone transcripts. This further recommends the product action to the service team or connects the customer with customer care specialist. AWS Machine Learning is easy to use as the user can locate the data within Amazon Web Services.

Existing System:

We are living in a fast technological world, where we couldn't live without data analytics on mobile and web applications. All the data analytics on mobile and web brings smarter lives and thus machine learning became a feather role in the mobile market. We can't use the mobile hardware to drive the machine learning algorithms in the mobile or web app and furtherly, we need some kind of cloud or web service which does the task for us.

Hence, many companies are looking at Amazon Infrastructure as it has lot of potential opportunities with amazon to explore the more technological innovations through web services. Thus, AWS is empowering all these kind of projects with standing innovation and spirit of AI.

Proposed System:

There are 8 AWS Machine Learning Benefits and they are Open Platform, API-Driven Machine Learning Service, Broad Framework Support, A Breadth of Computing Choices, Deep Platform Integrations, Comprehensive Analytics, Secure and Economical.

Sagemaker helps data scientists and developers very efficiently. It helps to build, train, and deploy Machine Learning Models.

Amazon Machine Learning is a visual tool, which helps to preview the data to ensure quality. After the model is built the user can use AWS Machine Learning tools to evaluate and tune them. After this, the model is ready for further predictions. These applications can also call the

batch API for predictions. In addition, real-time API can use to generate predictions on-demand. With Amazon ML the user can create data from large data sets, generate billions of predictions and serve these predictions in real-time and high throughput. There are no upfront costs for AWS ML only the user has to pay for what they have used. This benefits in a way such that the user can start small and scale application as the business grows

Software Tools:

1. AWS EC2
2. AWS IAM
3. AWS DynamoDB
4. AWS CloudWatch
5. AWS S3
6. AWS Sagemaker
7. VS Code
8. Python3
9. Boto
10. AWS CLI

Hardware Tools:

1. Laptop
2. Operating System: Windows 11
3. RAM: 8GB
4. ROM: 4GB
5. Fast Internet Connectivity

Applications:

1. Deploy any ML Model through this architecture
2. Using this you can easily pump this pipeline with Mobile Apps.