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1. Pre-requisites

• 1. AWS user account with providing billing account details.

2. AWS Marketplace

• AWS mAdvisor Automl homepage: https://aws.amazon.com/marketplace/pp/prodview-w3icje43u6d7w?ref_=beagle&applicationId=AWSMPContessa

OR

- Do search in browser for AWS Marketplace or click on the following link https://aws.amazon.com/marketplace to get into AWS Marketplace.
- Search for madvisor automl in search bar and then click enter button to get search results.



 Only one search result will get displayed, that's mAdvisor automl SaaS product.



mAdvisor Automl

By Marlabs Inc | Ver V1.0



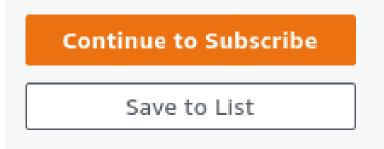
mAdvisor is an AutoML platform that translates data from enterprise systems into meaningful insights & predictions in the form of narratives without any manual intervention. AutoML gives users the power of cognitive technologies like machine learning, machine reasoning, deep learning, natural...

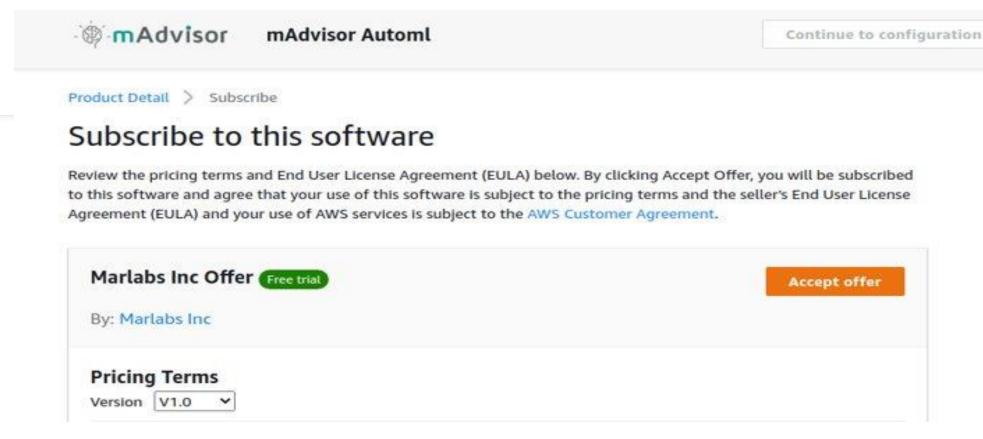
• The above search results will get displayed after clicking on Enter button. And then click on underlined mAdvisor Automl link text to get into AWS mAdvisor automl home page.

mAdvisor Automl By Marlabs Inc | Ver V1.0 Free Trial

3. AWS mAdvisor Automl

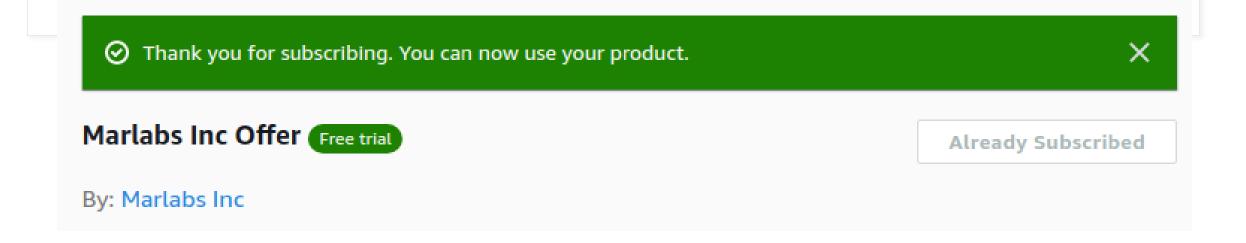
- You will get landed in AWS mAdvisor automl homepage, have a read for overview, Key Data, Pricing Information, Usage Information, and Support Information of the product.
- Then click on Continue to Subscribe button to use the service.
- After clicking on the button, will redirect to you to login page and confirm with login credentials.





- Please have a read about Pricing Terms, and End User License Agreement details before Accepting the offer from Marlabs.
- After reading click on "Accept offer" button to continue with Subscription.

• It will take a minute and will show below message as confirmation of Subscription.



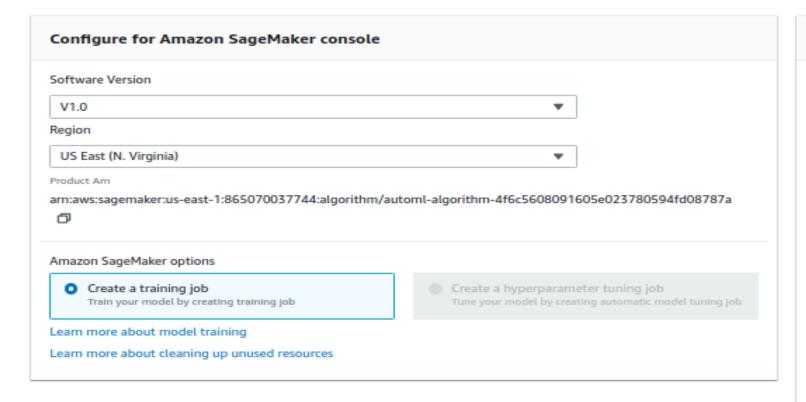
• Then click on "Continue to configuration" button, to do configuration and use the service.

Continue to configuration



Product Detail > Subscribe > Configure

Configure and launch



Cost Summary

Software

You have selected algorithm configuration. You're charged for the algorithm based on the product's pricing model for training and for inference.

Infrastructure

Costs for infrastructure are independent and in addition to the costs of software.

Free Trial

Try this product for 30 days.
There will be no software
charges, but AWS infrastructure
charges still apply. Free Trials will
automatically convert to a paid
subscription upon expiration.

4. AWS SageMaker

- We can select the Software version and Region we want to use by clicking on dropdown.
- Then there will be two Amazon sagemaker options, "Create a training job" and "Create a hyperparameter tuning job" (Enabled once done with training job).
- Once selecting the one of Sagemaker option, Click on the view in Amazon SageMaker Button, it will redirect to Amazon Sagemaker
 Page to create training job.

View in Amazon SageMaker

 AWS Sagemaker Page header will get showed as below after clicking on the "View in Amazon Sagemaker" button.

Amazon SageMaker Algorithms: My Subscriptions View subscription details Algorithms Using algorithm "automl-algorithm-4f6c5608091605e023780594fd08787a"

Create training job

When you create a training job, Amazon SageMaker sets up the distributed compute cluster, performs the training, and deletes the cluster when training has completed. The resulting model artifacts are stored in the location you specified when you created the training job. Learn more

To run the training job, need to provide Job name under Job settings,

Job settings

Job name

titanic-train

Maximum of 63 alphanumeric characters. Can include hyphens (-), but not spaces. Must be unique within your account in an AWS Region.

Target column name to Value in Hyperparameters and

Hyperparameters		
You can use hyperparameters to finely control training. We've set default hyperparameters for the algorithm you've chosen.		
Key	Value	
Target	Survived	

 Input dataset location, which is in S3 location in Input data configuration to S3 location textbox.

S3 location
s3://dataset-titanic/titanic_train.csv

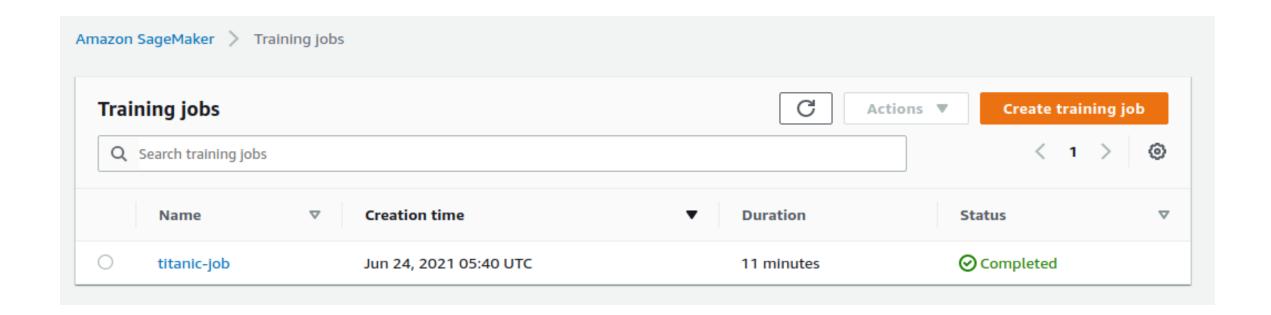
• And provide S3 bucket folder location to save the training model outputs into S3 folder S3 under "output path" in Output data configuration.

Output data configuration S3 output path s3://dataset-titanic/

• Finally click on "Create training Job" button to create the training job for given dataset.

Create training job

• After click on "Create training job" button, it will take some time to complete the job, here it took 11 minutes to complete the training job. And can see these in training jobs, by searching "Amazon SageMaker" in search bar then Training jobs under Training.



5. Create model package

Now, will create the model package to do scoring job by clicking on the training job that got created recently, "titanic-job" and then click on the Create model Package button inside the created training job page and it's 2 two step process.

Create model package

Step 1: Inference specifications

Create Model Package by providing **Model package name** inside the text box and keep other options as default and then click on **Next** button.

Model package name

titanic-model-package

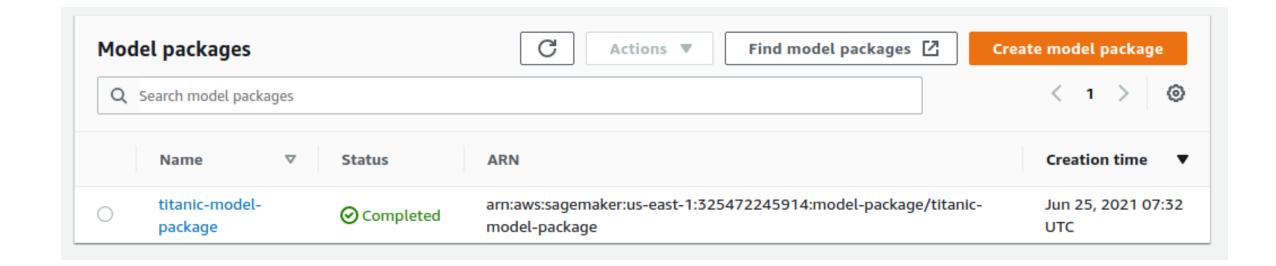
The model package name must be unique in your account and in the AWS Region and can have up to 63 characters. Valid characters: a-z, A-Z, 0-9, and - (hyphen)

Step 2 : Validation specifications

Here click on "Create model package" button to create the model package.

Create model package

Once the completion creation of model package will shown as below.



 After completion of model package, create model by clicking "Create model" button in the created model package page.

Create model

 Then provide "Model name" under Create model page, and keep all the values as default

Model name

titanic-model

Maximum of 63 alphanumeric characters. Can include hyphens (-), but not spaces. Must be unique within your account in an AWS Region.

and then click on "Create model" button.

Create model

6. Batch transform jobs

- Need to create Batch transform jobs, to do scoring. Click on Batch transform jobs under Inference in Sagemaker page.
- Then click on the Create batch transform job button to do scoring job.

Create batch transform job

 In the Create batch transform job page, provide Job name, and Model name by clicking on **Find model** button.

Job name

Maximum of 63 alphanumeric characters. Can include hyphens (-), but not spaces. Must be unique within your account in the same AWS Region.

Model name

titanic-model

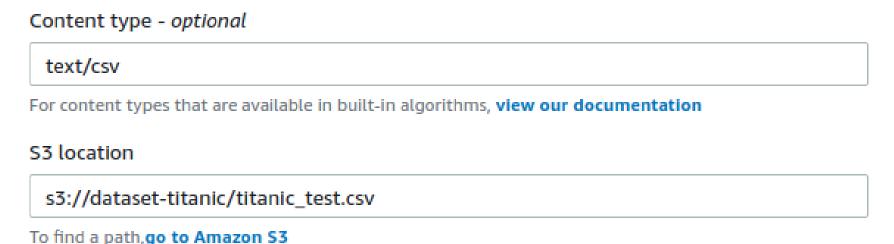
Q Find model

Maximum of 63 alphanumeric characters. Can include hyphens (-), but not spaces. Must be unique within your account in the same AWS Region.

Provide Instance type and Instance count to run the scoring job.



• Pass Content type (mandatory) and test dataset location, which in S3 bucket in S3 location as shown in Image under Input data configuration.



• Provide S3 folder location to get saved output scoring results in that location under **Output data configuration**.

Output data configuration				
S	33 output path			
	s3://dataset-titanic/			
Т	o find a path, go to Amazon S3			

• Finally, click on "Create job" button by keeping other values as default, will take some time and results will get saved in the given output location.

7. Limitations

 There is a limitation for batch transform jobs, if scoring dataset size is more than 5 MB then AWS will return the following message as an issue;

too much data for max payload size

So we need to make sure that the test dataset size should be less than 5MB size.