

# Introduction to AWS, Part 2



# AWS Sagemaker

Sagemaker is a managed machine learning service allowing for building, training, and deploying machine learning models on the AWS cloud.

As a bonus, building, training, and deploying models on Sagemaker can be done through Jupyter notebooks!

Sagemaker offers several of the most popular types of ML models and frameworks (sklearn, tensorflow), or you can write your own.

# AWS Sagemaker

Why use Sagemaker?

- Can work in Jupyter
- Don't have to worry about installing the anaconda packages - they are all preinstalled
- Sagemaker handles the spinning up and shutting down of the EC2 instances for the processing and training
- Easy deployment of models

# AWS Sagemaker

The first step is to sign in to the AWS Management Console:

<https://aws.amazon.com/console/>

When signing in, use Account ID *nashsoftwareschool*

Use the IAM user name and password I sent you.

# AWS Sagemaker


Once logged in, click on Amazon SageMaker

▼ All services



**Compute**

EC2

Lightsail 

Lambda

Batch

Elastic Beanstalk

Serverless Application Repository

AWS Outposts



**Machine Learning**

Amazon SageMaker

Amazon CodeGuru

Amazon Comprehend

Amazon Forecast

Amazon Fraud Detector

Amazon Kendra

Amazon Lex



# AWS Sagemaker

Amazon SageMaker ×

Amazon SageMaker Studio

Dashboard

Search

▼ Ground Truth

Labeling jobs

Labeling datasets

Labeling workforces

▼ Notebook

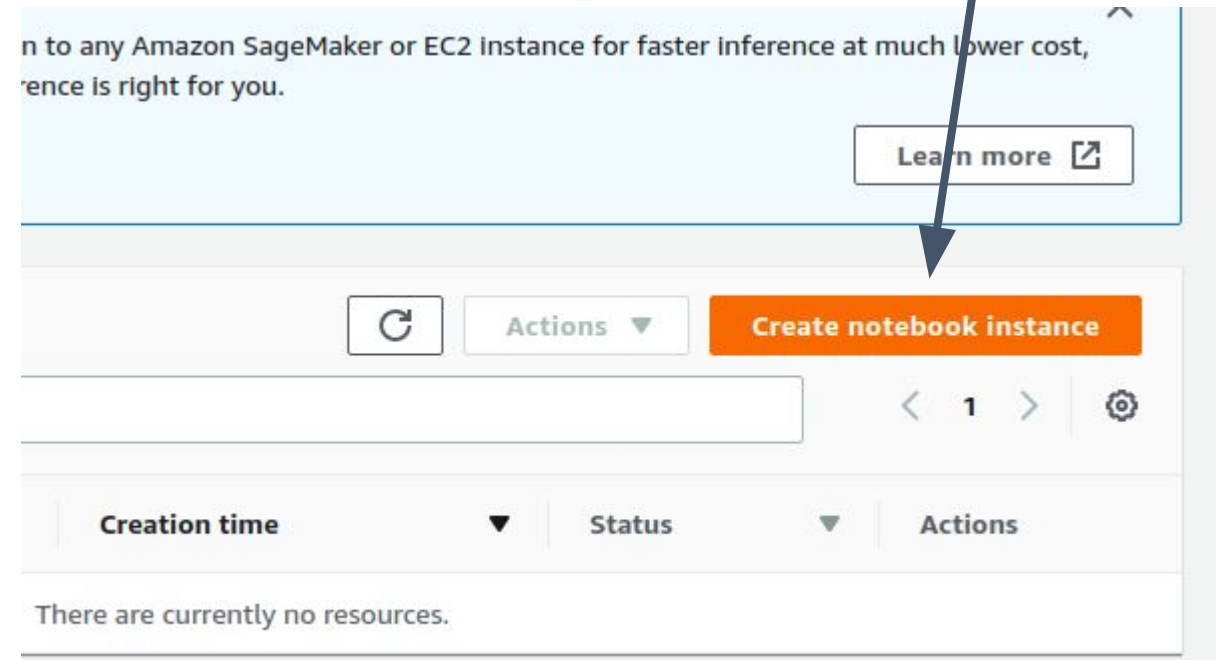
Notebook instances

Lifecycle configurations

Git repositories

On the left panel, click on  
“Notebook instances”

Then click this  
button



# AWS Sagemaker

Give you instance a name, and keep all other settings the same. It will likely take a couple of minutes to be ready to launch

## Notebook instance settings

Notebook instance name

<yourname>-instance

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

Notebook instance type

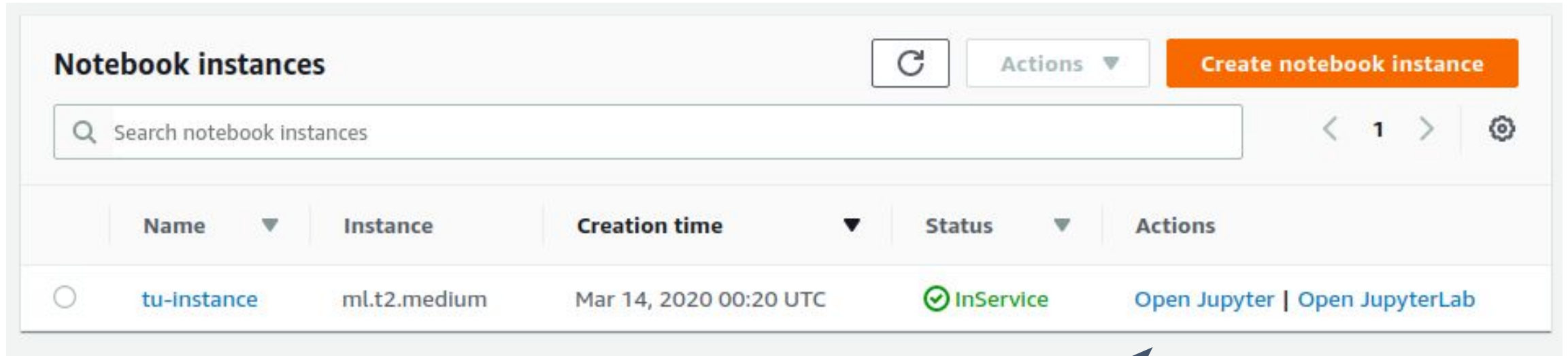
ml.t2.medium ▼

Elastic Inference [Learn more](#) 

none ▼

► Additional configuration

# AWS Sagemaker



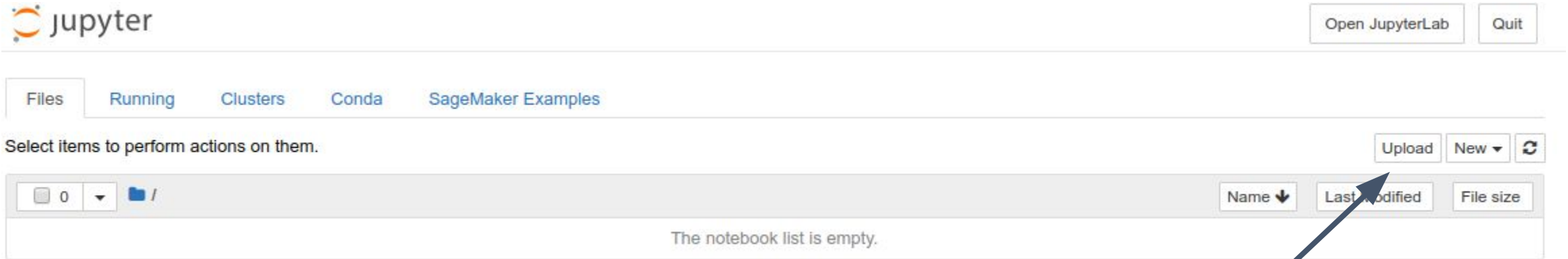
The screenshot shows the AWS Sagemaker Notebook instances console. At the top, there's a header 'Notebook instances' with a refresh button, an 'Actions' dropdown, and a 'Create notebook instance' button. Below the header is a search bar labeled 'Search notebook instances'. A table lists the notebook instances with columns: Name, Instance, Creation time, Status, and Actions. One instance is listed: 'tu-instance' with instance type 'ml.t2.medium', created on 'Mar 14, 2020 00:20 UTC', and status 'InService'. The 'Actions' column for this instance contains links for 'Open Jupyter' and 'Open JupyterLab'. An arrow points from the text below to the 'Open Jupyter' link.

	Name	Instance	Creation time	Status	Actions
<input type="radio"/>	<a href="#">tu-instance</a>	ml.t2.medium	Mar 14, 2020 00:20 UTC	<span>✓ InService</span>	<a href="#">Open Jupyter</a>   <a href="#">Open JupyterLab</a>

Once it become available, click on  
“Open Jupyter”



# AWS Sagemaker



Once in Jupyter, click the Upload button and upload the two walkthrough files.

Open the notebook, and we'll proceed from there.

# AWS Sagemaker

## ▼ Notebook

Notebook instances

Lifecycle configurations

Git repositories

## ▼ Training

Algorithms

Training jobs

Hyperparameter tuning jobs

## ▼ Inference

Compilation jobs

Model packages

Models

Endpoint configurations

Endpoints

Batch transform jobs

When finished, make sure to delete any models, endpoints, and/or notebook instances to avoid extra charges.

Endpoints				
<input type="text" value="Search endpoints"/>				
<div><div>↺</div><div>Update endpoint</div><div>Actions ▼<div>Add/Edit tagsDelete</div></div><div>Create</div></div>				
	Name ▼	ARN	Creation time ▼	Status ▼
●	sagemaker-xgboost-2020-03-14-00-43-29-562	arn:aws:sagemaker:us-east-1:339692866702:endpoint/sagemaker-xgboost-2020-03-14-00-43-29-562	Mar 14, 2020 00:47 UTC	✔ InService