Data Science and Machine Learning Bootcamp

SAGEMAKER

Running Code

Running code in our Machine can be quite intensive, especially for Machine Learning.

What if we could get the code to run on ”another machine” so that we could go on with our lives?
Running code on the cloud allow us to do that

For that, lets explore AWS SageMaker

**Note: there is much more to the cloud than this that we will learn near the end of the course. We are learning SageMaker because it is good for you to run code during the course*

SageMaker

AWS SageMaker is a product created by amazon to run Jupyter Notebooks on “another computer” (owned by Amazon). It is great for data professionals, as the front end is Jupyter, so something you are used to.

Lets see what we need to do

Steps the account

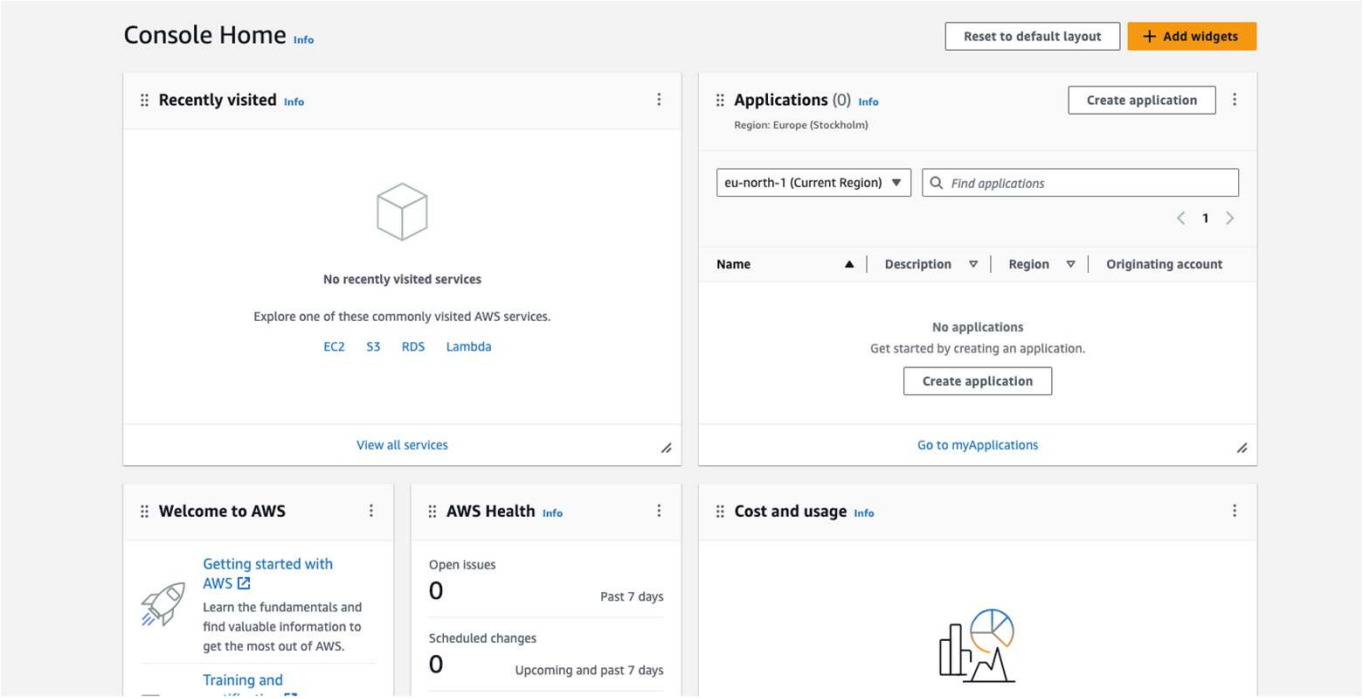
Go to AWS

- Create an account
- You will need to input: Name, (real) Email, Credit Card (Revolut Works), (real) Phone Number
- Select the Basic Support (Free) plan

Login and run the code

Go to AWS

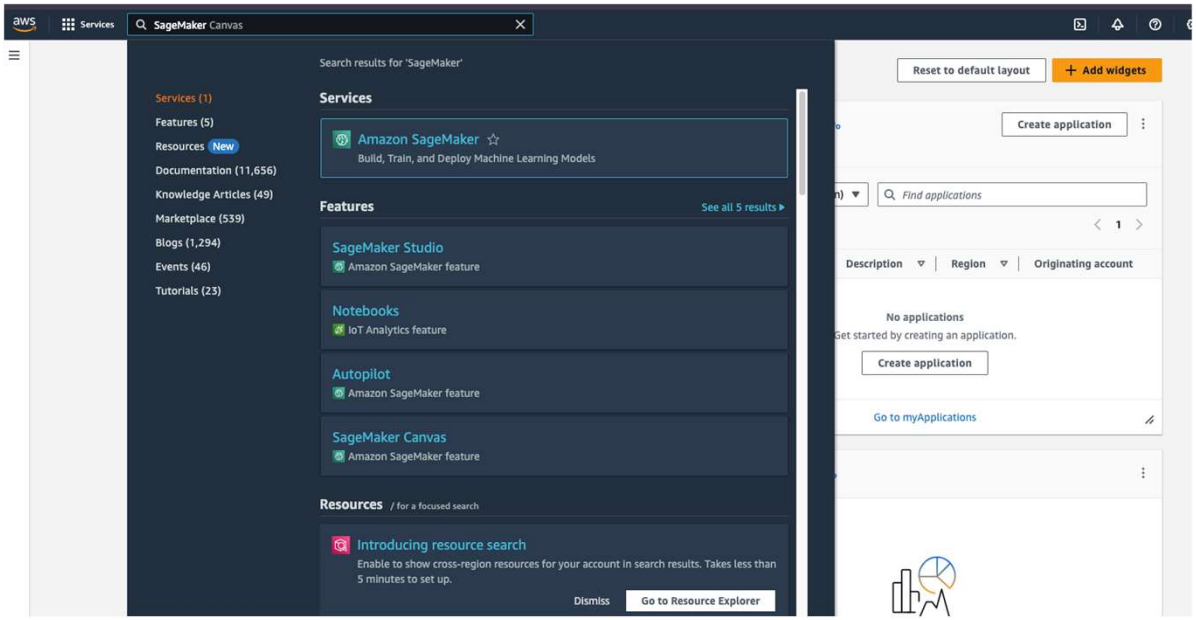
- Log in



Login and run the code

Go to AWS

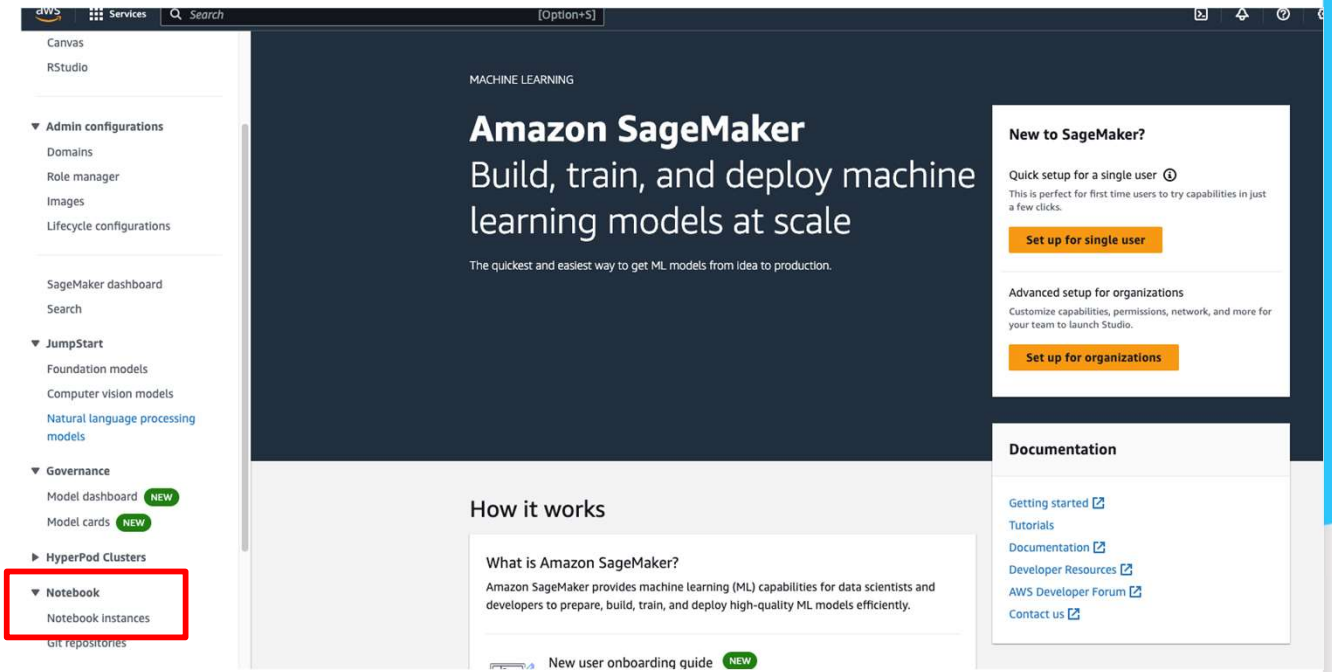
- Log in
- Search “SageMaker



Login and run the code

Go to AWS

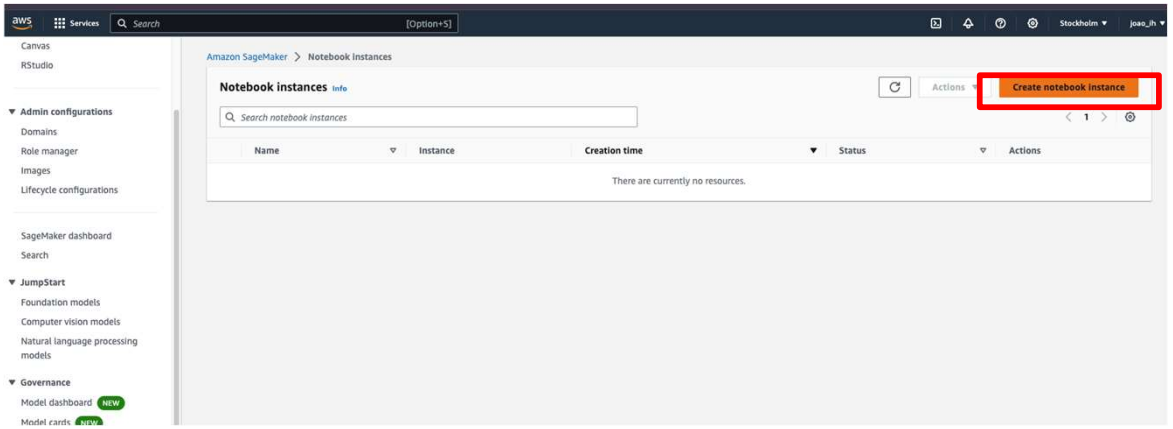
- Log in
- Search “SageMaker
- Go to Notebook instances



Login and run the code

Go to AWS

- Log in
- Search “SageMaker
- Go to Notebook instances
- Create notebook instance

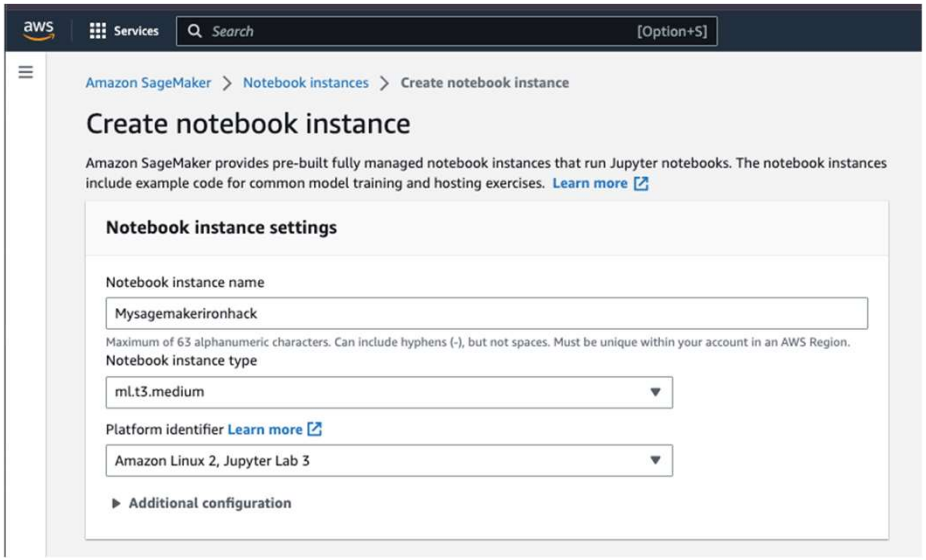


IMPORTANT – THIS COSTS MONEY (5cents/h, when the instance is on)
IronHack cannot be responsible for what students do in their AWS accounts
(See last slide: you have 250h/month free in the beginning)

Login and run the code

Go to AWS

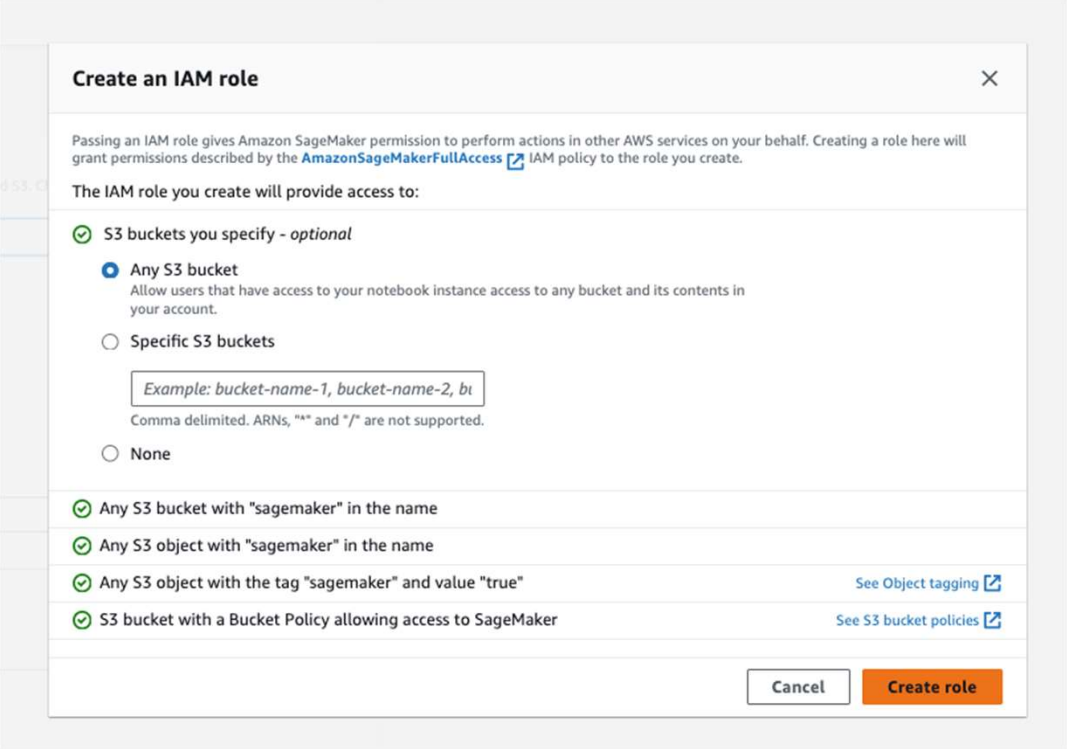
- Log in
- Search “SageMaker
- Go to Notebook instances
- Create notebook instance
- Give it a name;



Login and run the code

Go to AWS

- Log in
- Search “SageMaker
- Go to Notebook instances
- Create notebook instance
- Give it a name
- (First time) create na IAM role
- All other defaults are ok



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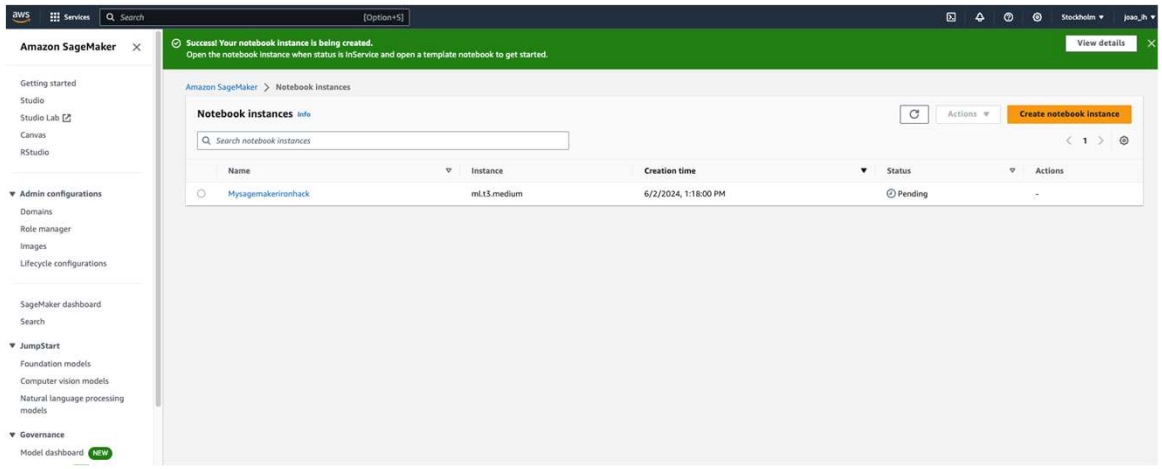
Go to AWS

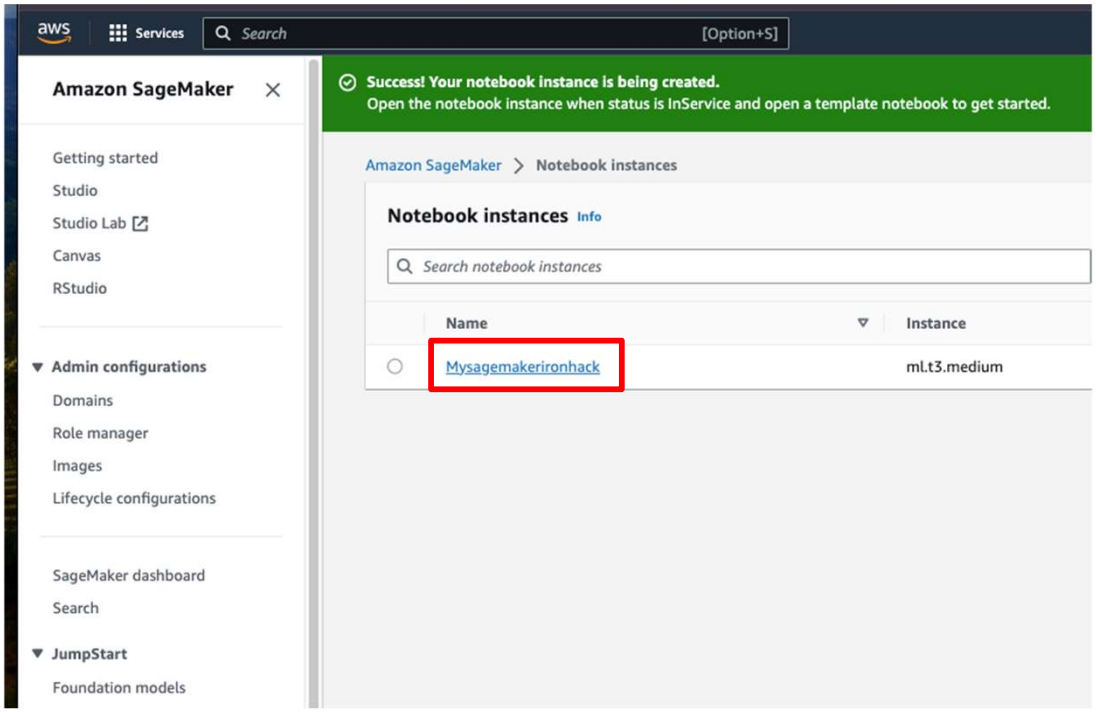
- Log in
- Search “SageMaker
- Go to Notebook instances
- Create notebook instance
- Give it a name
- (First time) create na IAM role
- All other defaults are ok
- SageMaker created!



Login and run the code

Go to AWS

- Log in
- Search “SageMaker
- Go to Notebook instances
- Create notebook instance
- Give it a name
- (First time) create na IAM role
- All other defaults are ok
- SageMaker created!
- Click the name to go in (it will take a few minutes)



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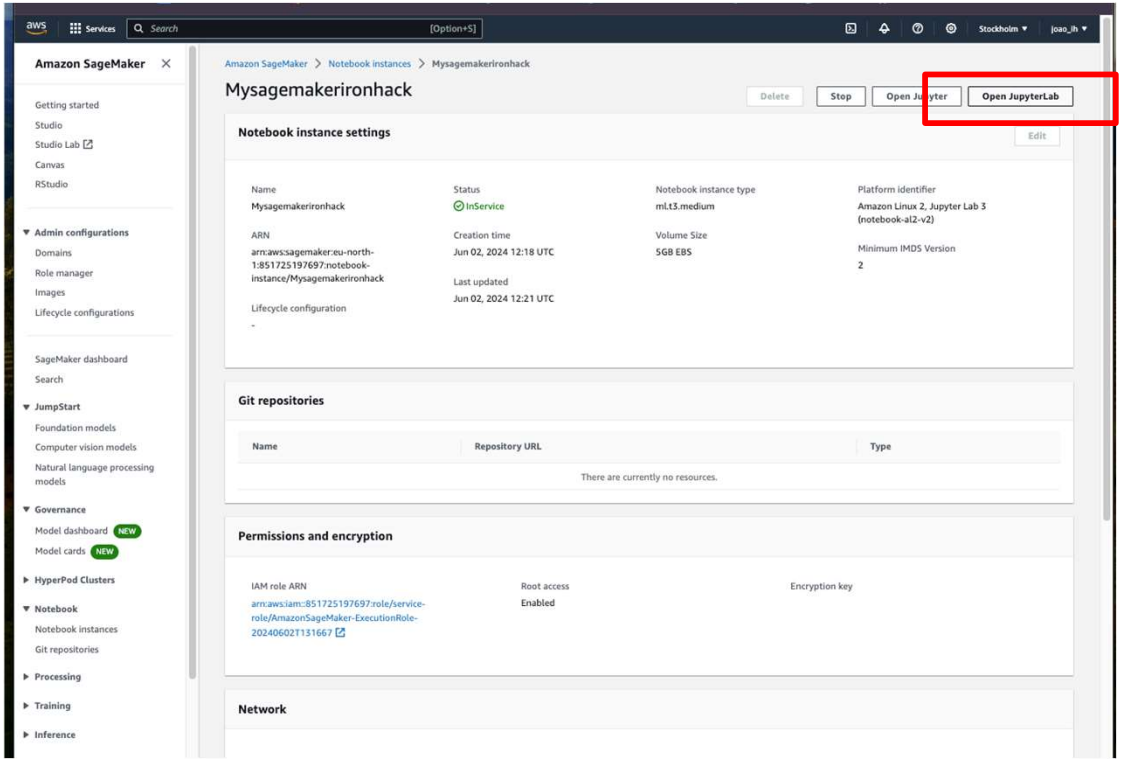
Go to AWS

- Log in
- Search “SageMaker
- Go to Notebook instances
- Create notebook instance
- Give it a name
- (First time) create na IAM role
- All other defaults are ok

- SageMaker created!
- Click the name to go in
- Click Open Jupyter Lab



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- Log in
- Search “SageMaker
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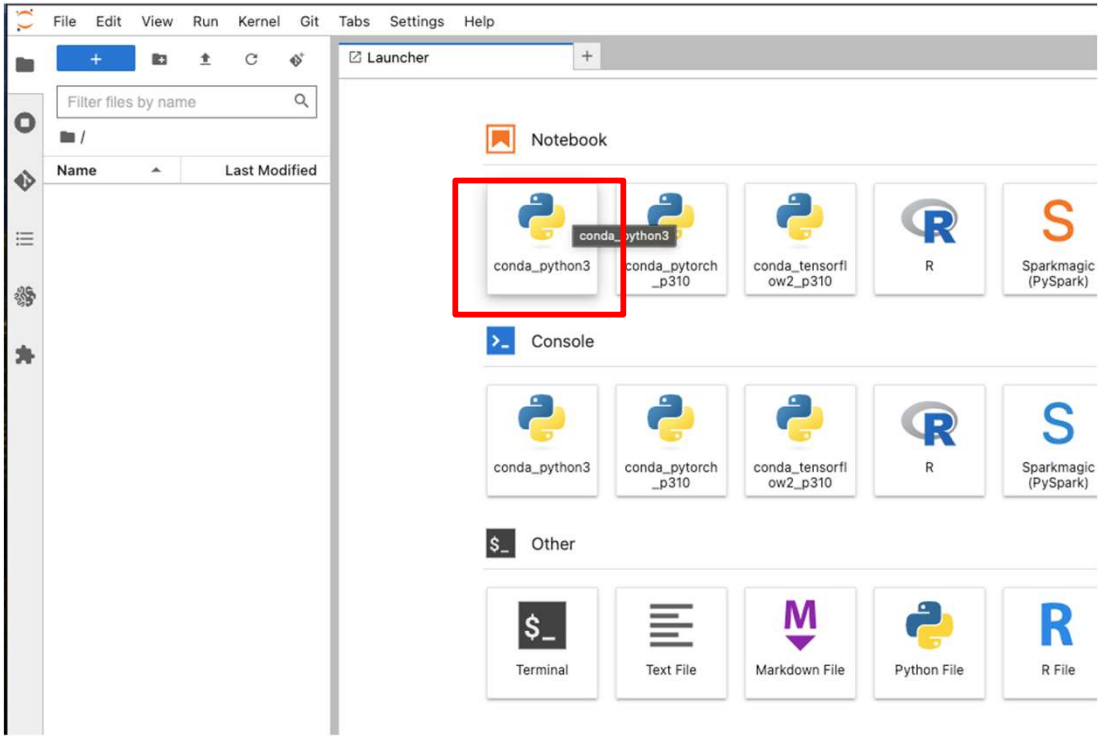
- All other defaults are ok

- SageMaker created!
- Click the name to go in
- Click Open Jupyter Lab
- Click Conda Python3



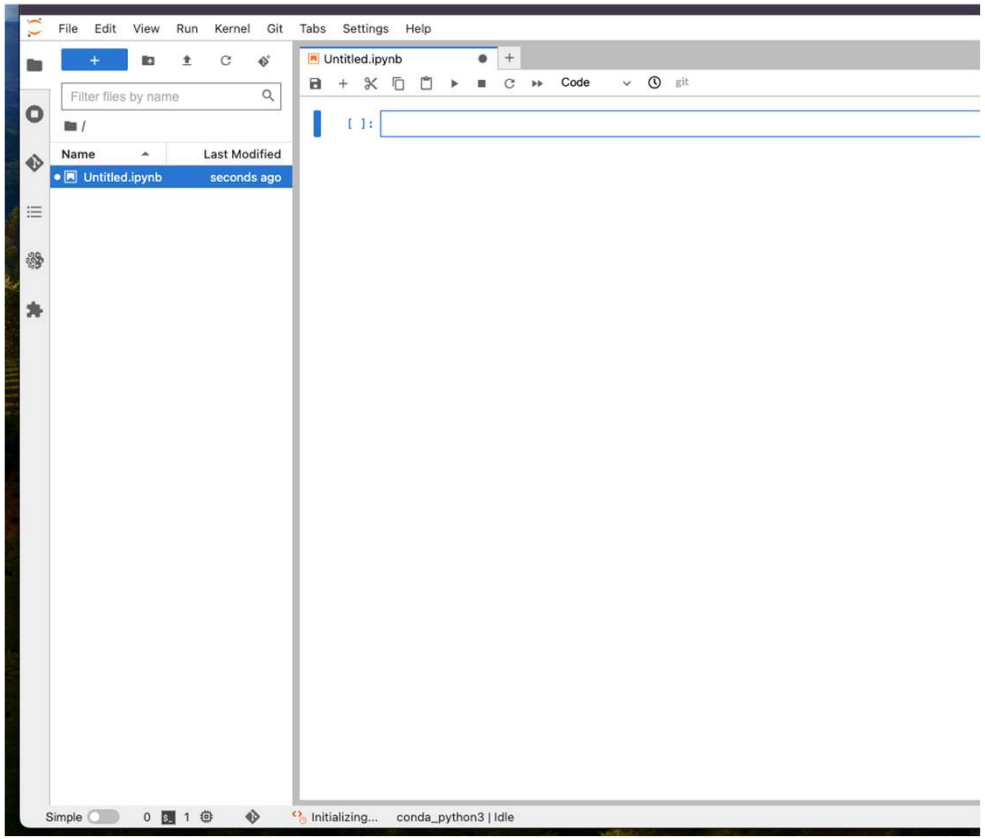
Login and run the code

Go to AWS

- And you are in a jupyter notebook

as you know it. You can run terminal commands by running !pip install as well as upload documents and data to your Notebook (via the upload button)

Be carefull with package instalation envs and directories in general

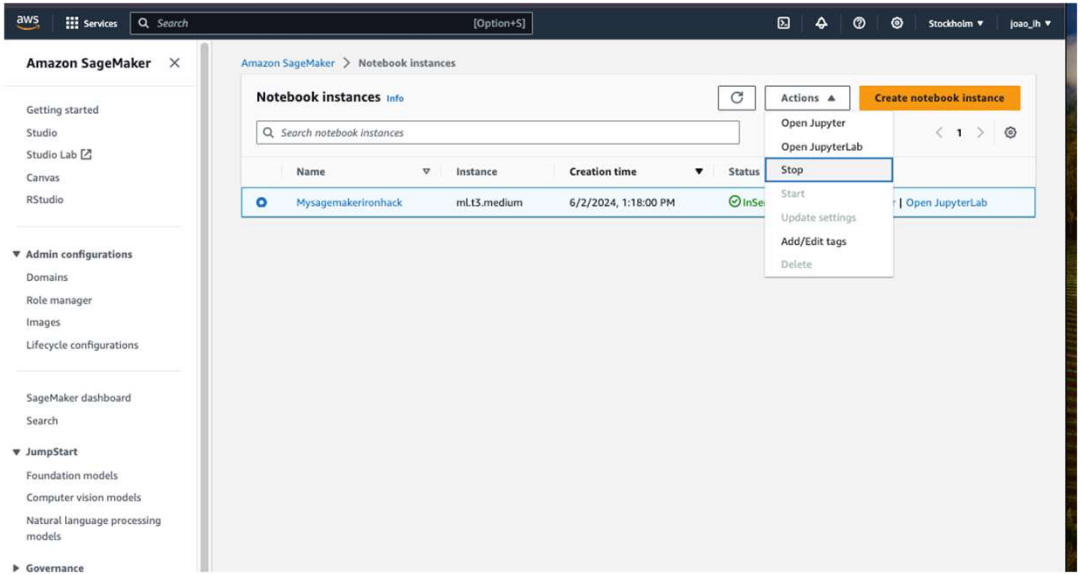


IMPORTANT

YOU HAVE TO STOP YOUR SAGEMAKER!!!!

IT costs 5cents/h which is nothing to run code,

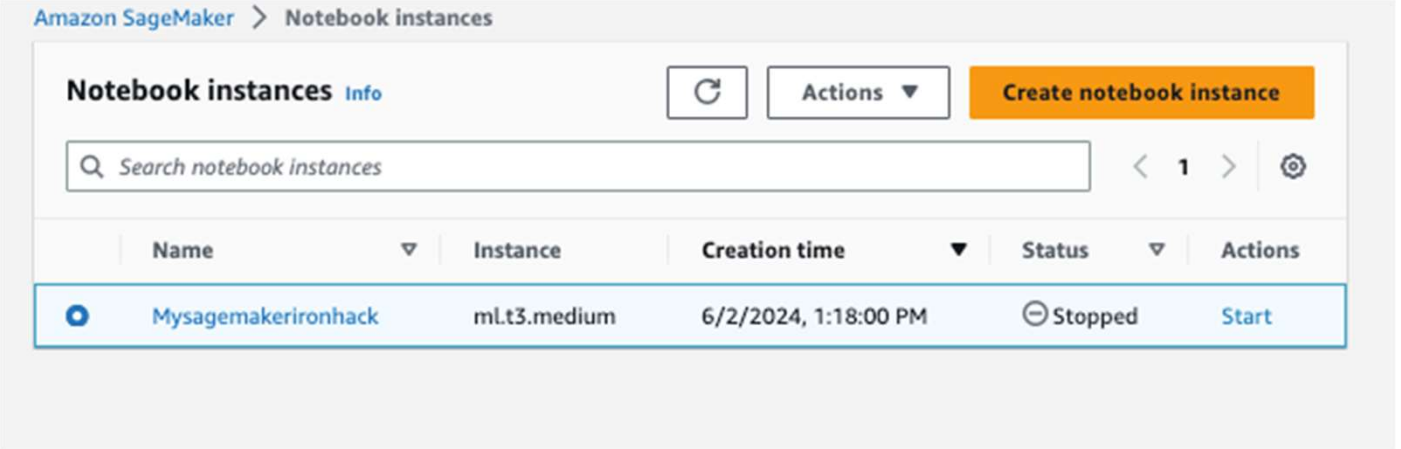
but does pile up if you leave it active for 3 months!!!



IMPORTANT

Stopped it looks like this

If you prefer, delete the instance



IMPORTANT

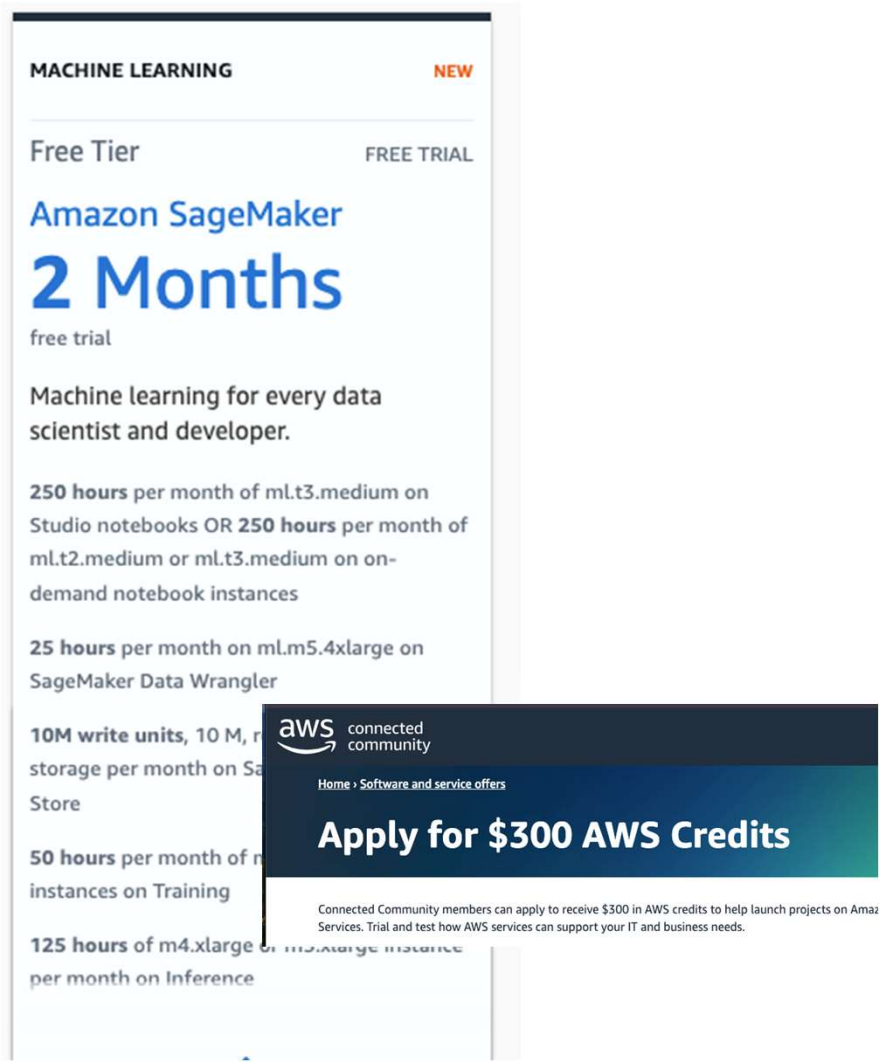
Amazon FreeTier:

- For 2 months (more than enough to finish the course)

You will have available some hours per month as well as you can apply to 300$ of AWS credits here:

https://aws-experience.com/amer/smb/exclusive-offers/aws-credits

NOTE: This is always chaning please confirm



Exercises

Exercise 1):

- Get your code to run in AWS

Exercise 2)

- Get your code to Run on Google Colab (MUCH EASIER)

Bonus Exercise (if you feel like a techy guy)

- Create the similar thing as SageMaker but in Google Cloud Platform's Vertex AI

https://cloud.google.com/vertex-ai/docs/workbench/instances/introduction

Good luck

Let’s get started!