# 11-785 Introduction to Deep Learning

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# Connecting to AWS machine

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## Creating a Instance:

1. Open following link: https://aws.amazon.com/ and click "sign into the console" with "sign in using root user email"
2. After logging in, manage your local zone
3. Check service quotas of Amazon EC2. On-demand G and VT instances should have some quota value. If not you can request it
4. Now search for instances and Launch an instance
5. Provide name to you instance (eg: IDL_testA)
6. Select Ubuntu Amazon Machine Image and choose an image with pytorch (eg: Deep Learning OSS Nvidia Driver AMI GPU PyTorch 2.7 (Amazon Linux 2023))
7. Select an Instance type of g5.2xlarge, cheap and powerful. Select this based on needed compute and storage.
8. Create a New Key pair (login) and download to your local machine
9. For Network settings make sure to check all 3 checkboxes
10. Configure storage based on requirements
11. Now Launch the instance
12. Open the SSH client connection for the instance and copy the ssh command

## Move to Local:

1. Move the downloaded .pem file to the .ssh folder
   $ rm Downloads/key.pem ~/.ssh/
2. Make the file executable and private
   $ chmod 400 .ssh/key.pem

## Open VSCode or you favourite code editor

1. Install Remote-SSH extension
2. Click "Connect to Host" and add the copied ssh command from AWS
3. Connect to Host

$ source activate pytorch_p310

Create a new python file, call it test.py and paste below code:
```
import torch

x = torch.rand(5, 3)
print("Is the GPU available:", torch.cuda.is_available())
print("Output of a random tensor \n",x)
```

Open terminal and execute
$ python <u>test.py</u>

Expected output:

```
● ((pytorch) ) ubuntu@ip-172-31-72-124:~$ python test.py
 IS the GPU available: True
 Output of a random tensor
  tensor([[0.9096, 0.2649, 0.4348],
          [0.2899, 0.7815, 0.4399],
          [0.9816, 0.7140, 0.5936],
          [0.1007, 0.9224, 0.4532],
          [0.7256, 0.4375, 0.4255]])
```