AWS Tutorial

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What is AWS and EC2

- AWS (Amazon web service) : cloud service platform provide by amazon, which includes:

  1. Compute: e.g. EC2 (Elastic Compute Cloud)
  2. Storage: e.g. S3 & EBS
  3. Database
  4. Networking
  …

Using EC2

- Just like ssh into a myth/corn machine

- More flexible: can install new packages

- More powerful: e.g. Use GPU to make training neural networks faster

```
ubuntu@ip-172-31-3-26:~$ python
>>> import tensorflow as tf
>>> hello = tf.constant('Hello, TensorFlow!')
>>> sess = tf.Session()
I tensorflow/core/common_runtime/gpu/gpu_device.cc:756] Creating TensorFlow device (/gpu:0)
 -> (device: 0, name: GRID K520, pci bus id: 0000:00:03.0)
>>> print(sess.run(hello))
Hello, TensorFlow!
>>> a = tf.constant(10)
>>> b = tf.constant(32)
>>> print(sess.run(a + b))
42
```

EC2 and TensorFlow setup

- We provide an AMI (amazon machine image) that already has TensorFlow installed.

- All you need to do is to launch your instance using that AMI.

- A step-by-step tutorial can be found on the class website

Data Storage when using EC2

- The way data is stored is different than myth/corn
- When you terminate an instance, all the data on that instance would be lost!
- However, for EBS-backed instance, data is preserved when you choose to stop it instead of terminate it. EBS-backed instance is our default set up.
- You can also store your data somewhere else, e.g. S3

Useful topics for doing final project using AWS

- IAM (Identity and Access Management) :
  Standard way to share resources, such as EC2 instance and S3
  Link:
  http://docs.aws.amazon.com/IAM/latest/UserGuide/introduction.html

- Exchange data between EC2 and S3:
  You can use Amazon S3 to store backup copies of your data
  Link:
  http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AmazonS3.html