tensorflow-char-rnn AWS setup

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1. **Setup AWS EC2**
    1. Go to https://aws.amazon.com/ to get a free account (Basic).
    2. Go to dashboard select “EC2" under “Compute”.
    3. Click on "launch instance"
    4. Select ubuntu **Ubuntu Server 14.04 LTS (HVM), SSD Volume Type**
    5. Select t2.micro “Free tier eligible”, click “Review and launch”
    6. Click on launch, generate a new key pair, download and be sure to save it somewhere you know. Without this file, you won’t be able to use the instance!!!
    7. Wait for the instance to launch.
    8. chmod 400 path/to/your/key_file (change permission of your key file to make it safe) on Linux or Mac, or change the permission of the file to be read only if you are on Windows.
    9. ssh -i path/to/your/key_file ubuntu@your-ec2-address (Public DNS or Public IP)
       Here’s some videos about how to ssh to your ec2 instance or how to use Putty to connect to ec2 instance if you are using Windows. Remember you still need to put “ubuntu@” before the ec2-address.
    10. Now you have an ubuntu machine to play with!
    11. Remember to terminate your machine after the homework. Only the first year is free, so if you keep it running for more than 1 year…...

2. **Setup TensorFlow and Char-RNN**
    1. Go to this github repo. Take a look at the Readme. Star it to get notified about new changes (e.g., bugfix), and fork it to create your own repo to work on (both on top right corner).
    2. In “setup.sh” (included in the homework handout), replace your own repo in https://github.com/your-repo.git”, see here for more information.
    3. Copy “setup.sh” to your AWS ec2 machine:
       scp -i path/to/your/key_file path/to/setup.sh ubuntu@your-ec2-address:~/
       Or use WinSCP if you are using Windows.
    4. Then login to your machine:
       ssh -i path/to/your/key_file ubuntu@your-ec2-address (Public DNS or Public IP)
    5. Setup TensorFlow and Char-RNN:
       chmod 700 setup.sh
       sudo ./setup.sh
       or copy, paste and execute the commands in the script by hand. (Remember to add sudo before the command).
    6. Go into tensorflow-char-rnn folder and run tests:
       cd tensorflow-char-rnn
       chmod 700 ./scripts/test.sh
       ./scripts/test.sh
       If the tests finish with no error, you get a working TensorFlow and Char-RNN to play with!

3. **Expose ports for tensorboard visualization**
    1. TensorFlow comes with a nice visualization tool called Tensorboard. It enables you to monitor your training remotely in browser. But you need to expose some ports of your ec2 instance first.
    2. Go to the "Security Group" settings in the left hand navigation
    3. Find the Security Group that your instance is apart of
    4. Click on “Inbound" tab on the bottom
    5. Click on “Edit”, then “Add Rule”.
    6. Use the drop down menu to select “Custom TCP Rule", set "Port Range" to 6000-7000, and “Source" to “anywhere".
    7. Click Save