Jason Loo

Comp 175

Project 1

**Proposal 2**

* What server application are you proposing to use?
  + Training a Deep learning model with slurm so it runs one application at a time
* What does this application do?
  + While using AWS Deep learning Containers deployed on an EC2 instance, we can train a free-open source machine learning model. As recommended, maybe implementing SLURM into the EC2 Instance in order to allow only 1 person to use it at a time
* What references do you have that explain how to install it on a server? Provide the links.
  + <https://aws.amazon.com/machine-learning/containers/>
  + <https://docs.aws.amazon.com/dlami/latest/devguide/tutorial-tensorflow.html>
  + <https://cyberlab.pacific.edu/courses/comp175/labs/lab-2-aws-vpc-security-groups> (configuring an EC2 instance and possibly making security groups)
  + <https://github.com/keras-team/keras> (using an existing deep learning API, since writing one from scratch is a project on its own for a different class)
  + <https://slurm.schedmd.com/documentation.html>
  + https://slurm.schedmd.com/quickstart\_admin.html
* How will you demonstrate that you have successfully installed it?
  + After executing the example github python script, it will begin training the model and a screenshot of the progress should suffice
  + And attempting to run multiple instances should result in a queue that runs an application one at a time
* What references do you have that explain how to properly secure this application? Provide the links.
  + <https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies_manage-attach-detach.html> (for adding permissions via AWS IAM(identity and access management))
  + <https://cyberlab.pacific.edu/courses/comp175/labs/lab-2-aws-vpc-security-groups> (for security groups if necessary)
* How will you demonstrate that you have successfully secured it?
  + Screen shot of the IAM setup and json policy(have to edit a given json)
* What will your project cost in terms of AWS credits? What is the basis of this cost estimate?
  + Should not be over $1-2 since I am demonstrating the progression of the deep learning training, can easily stop/terminate