Lab9 Intel AI DevCloud

COMP4901K and MATH 4824B
Fall 2018

Prerequisites

In this lab, we will read through Intel®AI DevCloud document at `https://access.colfaxresearch.com/`. You need to click your own access link in email which has the ?uuid=... set. You can first read the "Connect" section, then "Learn" and "Compute". After this lab, you can upload and run lab8 answer on the cloud.

You need to prepare the lab8 answer code and download launch.sh

1 Server Connection

1.1 Terminal

- Preparation (*nix users)
  - Download and save the Linux access key to the folder ~/Downloads/ on your computer
  - add ~/.ssh
  - (Optional) Copy the private key to ~/.ssh folder

    ```
    mkdir ~/.ssh
    mv ~/Downloads/colfax-access-key-* ~/.ssh
    touch ~/.ssh/config
    chmod 700 ~/.ssh
    chmod 600 ~/.ssh/colfax-access-key-*
    chmod 600 ~/.ssh/config
    ```

  - Edit ~/.ssh/config:
- Install packages

```
[language=bash]
      pip3 install --user --upgrade keras nltk
```

1.2 Jupyter Notebook

1. Notice:
   - Connect-2.1Warnings: Your Jupyter sessions have a RAM usage limit (virtual memory limit) at 48 GB. There is also a time limit, which is shown at the top right of the screen.
   - Kernel: Python 3 (Intel, 2018)
   - Install pip packages

     ```
     import pip
     pip.main(['install', '--user', '--upgrade','keras', 'nltk' ])
     ```

2. autoreload

   ```
   % load_ext autoreload autoreload 2
   ```

2 File Transfer

- Rsync:

  ```
  rsync -r lab8 colfax:~
  ```

- If you prefer GUI: cyberduck
- Windiows: WinScp

3 Job Submission

Use the attached shell script to submit job.

```
qsub launch.sh
```

4 Assignment

You need to run the answer of lab8 for 1 epoch (locally or on cloud), and submit the program output on Canvas.

Appendices

A Documentations

- Shell commands: `https://www.learnshell.org/` or `https://www-xray.ast.cam.ac.uk/~jss/lecture/computing/notes/out/commands_basic/`
- GNU Bash manual
- How does scp differ from rsync

B Terminal Editors

- GNU nano: very simple editor. Easy to learn: simply run nano, and get nano help by pressing Ctrl−g.
- Vi/Vim: highly configurable and very efficient. It's difficult to learn, invoke vi till you feel confident. The vimtutor command is a good start.
- GNU Emacs: people use "vim" inside emacs.

C Version Control

You will benefit from git if you take your code serious. Use online services like GitLab will help you snyc code too.