

AIST4010 Spring2023 Tutorial 1

Setting up Deep Learning Environment

Licheng ZONG

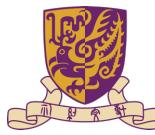
Ph.D. Student, advised by Prof. Yu LI

Thursday, Jan 12, 2023

lczong@link.cuhk.edu.hk

Department of Computer Science and Engineering (CSE)

The Chinese University of Hong Kong (CUHK)



Introduction

Deep Learning Environment

Local environment

Device:

- CPU Slow
- GPU Powerful

Operation systems:

- Windows & Mac
- Linux

Cloud environment

Recommended

- Colab
- Kaggle

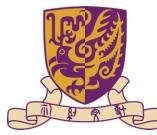
Server environment

Recommended

- Slurm

not recommended
the main deep learning system for researchers

Cloud Deep Learning Environment



Colab

Colab, or “Colaboratory”, allows you to write and execute Python in your browser, with:

- Almost zero configuration required
- Free access to GPUs
- Easy to share

The GPUs available in Colab are often Nvidia K80s for free users.

Cloud Deep Learning Environment



Kaggle

Kaggle offers a no-setup, customizable, Jupyter Notebooks environment.

- Almost zero configuration required
- Free access to GPUs
- A huge repository of community published data & code.

Regarding the programming environment, it's similar to Colab.

It's a community where you can learn and participate competitions.

The GPUs available in Colab are often Nvidia P100s for free users. (33 hours a week)



Local and Server Environment

Local Environment

Linux + NVIDIA GPU + CUDA + Deep Learning

[Tutorial-English](#)

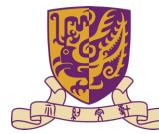
[Tutorial-Chinese](#)

Server Environment

We will provide 1-2 gpus from cse department for you to do your assignments.

We are working on it and will give the tutorials later

Deep Learning Libraries



PyTorch vs. TensorFlow

Both are acceptable for assignments and projects.
You can choose what you like.

PyTorch is easier to use and more popular recently.

Personally I recommend **PyTorch** and tutorials will be mainly based on PyTorch.

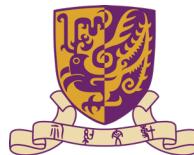


What you need to do

Assignment 0

- Get familiar with **Colab** (All these tutorial materials will be released)
- Go to the A0 link to learn about **Kaggle**
- Register on Kaggle and set your team name for submission.
 - The submission name should be different with your real name
- Submit a version of classification code (Beat the baseline!)

It's a non-grading assignment, so don't worry whether your score is very high. Just being above the baseline is fine.



Thanks for listening!

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