## **A simple guide for Experiment on LANL Earthquake Prediction**

*This simple guide allow you to repeat our experiments.*

## **1. Create a machine**

First of all you need a machine with more than 15GiB of memory and more than 1 core. If you have it, you can skip this step. Otherwise, you need to set a machine on cloud. For this experiment, we used a VM instance on **Microsoft Azure Cloud** (NC6 Standard machine with 6 virtual CPUs, 56 GBs RAM and Ubuntu). We assume to have **Ubuntu** on VM.

## **2. Login on VM**

If you use your pc, skip this.

After you have been created a VM, you need to access to it. You can do it in two different way, depending on your O.S. .

On **Windows** you need to install:

1. **PuTTY**, an SSH and telnet client (https://www.putty.org/).
2. **Xming**, a useful tool for remote windows (graphs and other). (http://www.straightrunning.com/XmingNotes/).

On **Ubuntu** you can use **ssh** command with -X option (https://www.ssh.com/ssh/command/).

On **Windows** you have to launch Xming, then Putty. Before starting ssh session, you need to able "X11 Forwarding" (Putty > Connection > SSH > X11). Then, you can enter on your VM with IP, username and password.

## **3. Configure your VM**

You should have the **git** command , otherwise:

sudo apt-get install git

The repository with our experiments is on **Github**, you need only to make a git clone:

git clone https://github.com/GiusTemp/kaggleunibo

The code (in python) is inside the **/code** directory. You can find here a subfolder **/results**, where there are all our results. Before running scripts, you need to download the **repository with training and test set**.

pip install kaggle

kaggle competitions download -c LANL-Earthquake-Prediction

To run correctly kaggle, a file called **kaggle.json** in **/.kaggle** need to be configured. This json file is generated automatically from your **Kaggle account** , so you have to download and put it into a /.kaggle repository (it is an hidden directory in your home). You will use it for **download data** and **submit solutions**. (For more details https://github.com/Kaggle/kaggle-api).

## **4. Run a script**

If you want to run a script, you should set correctly a **path inside the code**. The folder **/code**  contains all our experiments, if you want to run one:

python SCRIPT\_NAME.py

It could take some minutes for execution, depending on your machine. When it will finish, you can submit your solution with a simple command:

kaggle competitions submit -c LANL-Earthquake-Prediction -f YOUR\_RESULTS.csv -m "MESSAGE"