Assignment-0

Artificial Intelligence (CSO-241)
IIT (BHU) Varanasi

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1 Create Python virtual environment

Follow the steps given in the link to create a Python (version 3.5+) virtual environment.
Link : Tutorial

2 Installing libraries

2.1 Python libraries

You have to use the virtual environment created in the first step for downloading libraries. With this assignment you are provided **requirements.txt** file. Type the following command in your virtual environment.

```
pip install -r requirements.txt
```

2.2 CRF++

2.2.1 For Windows

Download CRF++ 0.58 from this link

2.2.2 For Linux/MacOS

Download CRF++ 0.58 from this link

For installation follow the steps below:

```
Extract the tar.gz archive and run the following commmands:
cd your_path_here/CRF++-0.58
./configure
make
sudo make install
```

Alternatively follow this link

2.3 Cascade Trainer GUI

This is a GUI tool that can be used to train, test and improve cascade classifier models. This tool is only available for Windows.

2.3.1 Instructions to download

Follow this link to the official download page link

3 Weka

3.1 For Windows

Click here to download. This will install Weka executable in your Program Menu.

3.2 For Linux

Click here to download a zip archive for Linux

3.3 For MacOS

Click here to download a disk image for Mac OS

4 Verifying the installation

4.1 Python libraries

To check Python libraries correctly installed, run the python script **check_installation.py** given with this assignment.

4.2 CRF++

4.2.1 For Windows

Just ensure that you have **crf_learn.exe** and **crf_test.exe** files in the extracted folder.

4.2.2 For Linux/MacOS

Type the following commmands:

```
1. ./crf_learn
```

You should get output like this:

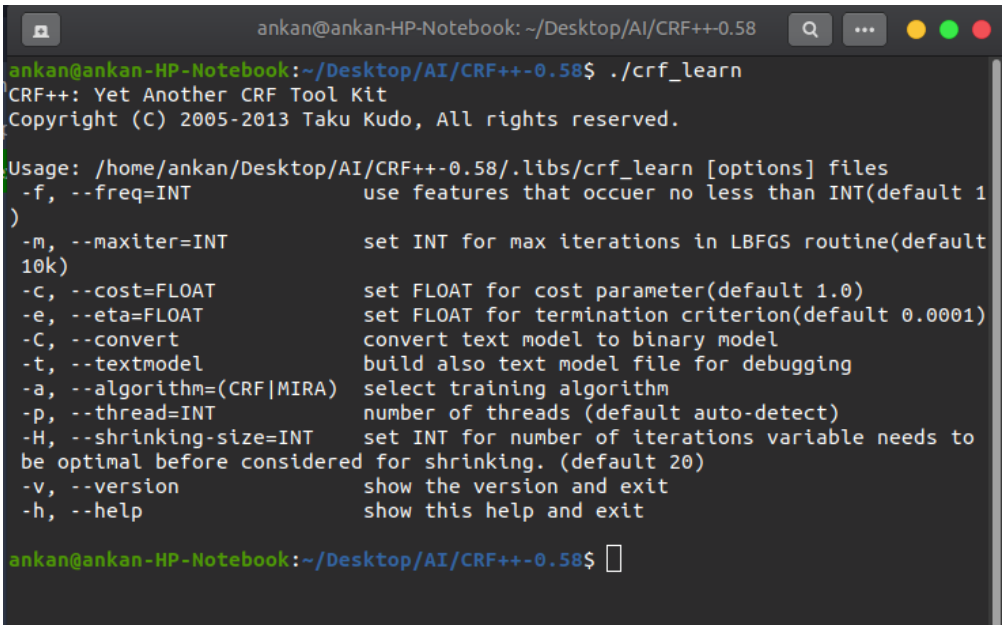

Figure 1: Testing **crf_learn**

2. `./crf_test`

You should get output like this:

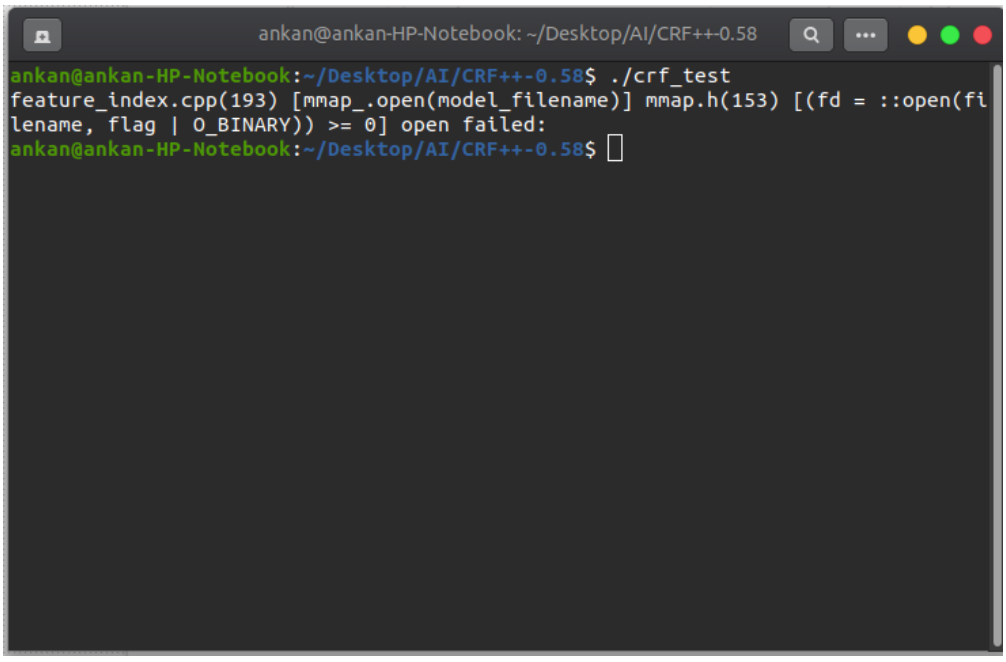

Figure 2: Testing **crf_test**

4.3 Weka

4.3.1 For Linux

To run Weka, change into that directory and type

```
./weka.sh
```

You should get output like this:

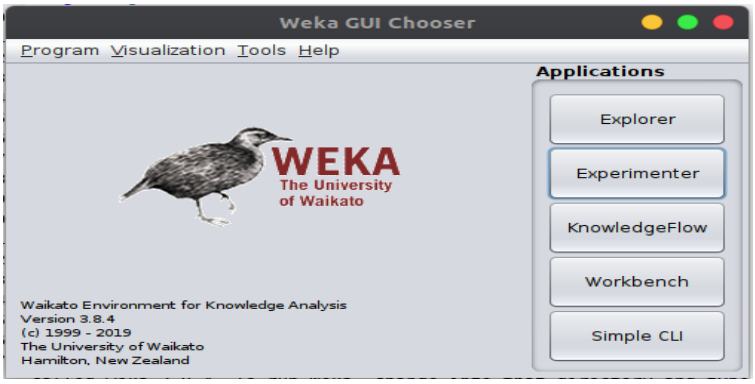

Figure 3: **Weka GUI**

4.3.2 For Windows

Run the exe file after installation.

4.4 Cascade Trainer GUI

4.4.1 For Windows

You should see the following window after installation.

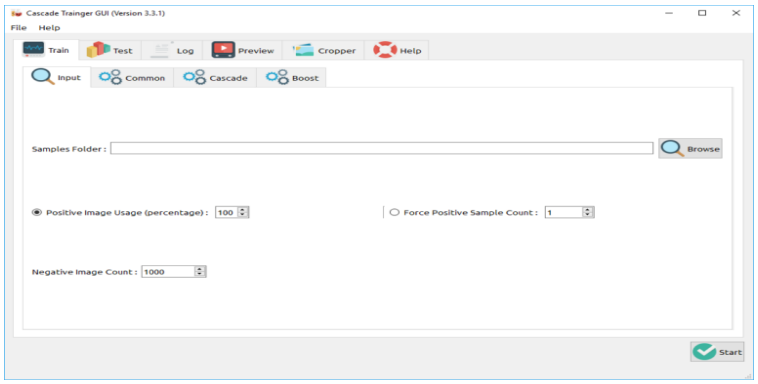

Figure 4: **Cascade Trainer GUI**

NOTE : If you have any queries, ask on the Google Classroom.