This project is used to detect the DDoS attack over the network.

**Prerequisites:**

* Python programming language
* Machine Learning
* Good knowledge of Computer Networking
* Should be familiar with Ubuntu 16.04 operating system.

**Requirements:**

Operating System: Ubuntu 16.04

Programming Language: Python 3.x

There are few libraries required for this project make sure to install them.

**STEPS TO INSTALL MODULES TO RUN THE PROJECT**

1) sudo apt-get install python3-tk

2) sudo apt-get install python3-pandas

3) sudo apt-get install python3-sklearn

4) sudo apt-get update

5) sudo apt-get python3-pip

6) pip3 install –U scikit-learn

**Changes to be made in project:**

1. Inside **detect.py** find line numbers 127 and 129 and change the IP address to system`s present IP address.
2. Inside **detect.py** find line number 202 and change the login credentials.
3. Inside **sniffer.py** find line number 91 and change to your Ethernet port number.

This project has been tested and worked efficiently over LAN with all the systems connected over same class of IP addresses.

**Running the project:**

**All the executions should be made through terminal itself.**

1. Keep one machine to normal ping by typing following command

**ping (ip address of attacking system)**

1. Run **sniffer.py** to sniff the packets by typing following command

**sudo python3 sniffer.py**

1. Attack from other machine by typing following command

**sudo ping –f –c 1000 (ip address of attacking system)**

Attack should happen within 5 seconds after running **sniffer.py**

1. Run **detect.py** to detect the attack by typing following command

**sudo python3 detect.py**

You might get error for sending of email but don`t worry that is just because of your google authentication. But the project will execute successfully and the attacker`s IP address will be displayed in the terminal.