

Folder contents

Ensure that your folder has the following files:

- prediction_cli.py
- random_forest.pkl
- rf_geo_loc_encoder.pkl
- rf_tld_encoder.pkl
- xgb_model.pickle
- xgb_model_enc_tld.pkl
- my_model folder
- requirements.txt

Running the CLI App

1. Ensure you have pip installed.
2. Create and change to a new environment (if desired)
3. Install the required libraries

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

Run the classifier by running:

```
python prediction.py -w <website_name>
```

Benign Example:

```
python prediction_cli.py -w http://www.google.com
```

```
python prediction_cli.py -w google.com
```

Sample benign output:

```
(tf-gpu) C:\Users\hatzi\Documents\SUTD\System Security Project\Code\model_files>python prediction_cli.py -w google.com
Prediction for google.com : benign
(tf-gpu) C:\Users\hatzi\Documents\SUTD\System Security Project\Code\model_files>python prediction_cli.py -w http://google.com
Prediction for http://google.com : benign
```

Another benign sample (Google's IP):

```
python prediction_cli.py -w http://172.253.118.101/
```

A malicious sample (not Google's IP)

```
python prediction_cli.py -w http://190.253.118.101/
```

Sample output:

```
(tf-gpu) C:\Users\hatzi\Documents\SUTD\System Security Project\Code\model_files>python prediction_cli.py -w http://172.253.118.101/

Prediction for http://172.253.118.101/ : benign

(tf-gpu) C:\Users\hatzi\Documents\SUTD\System Security Project\Code\model_files>
(tf-gpu) C:\Users\hatzi\Documents\SUTD\System Security Project\Code\model_files>python prediction_cli.py -w http://190.253.118.101/

Prediction for http://190.253.118.101/ : malicious
```