

BLE Datasets

UCN

INT

RSSI

CFO

Power-efficient mode

Features Judgment

Monitoring

UCN



INT



Evaluation

RSSI

Out? ✓

CFO

Out? ✓

Abrupt changes

Potential attacks ?

Collect

Spoofed batches

Abnormality in each feature

Demanding detection

Reconstruction Model

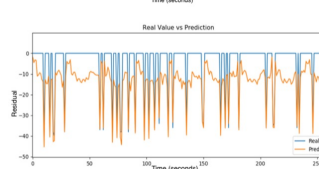
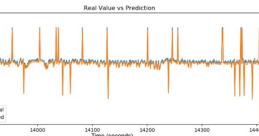
TCN Model

Offline training

$$R_{\alpha} = |D_T - D_L|$$

Online testing

$$\text{if } |R_{\alpha} - \mu R_{\alpha}| > 3\sigma R_{\alpha} \xrightarrow[\alpha=1]{\text{Collect}}$$



Spoofed batches

Classification Models

Benign package

Malicious package

SVM

KNN

RF

Bayes

Evaluation

Header Payload

Header Payload

Header Payload

...

Header Payload

Statistical features

Payload features

Payload

Payload

...

Payload

Payload

Text-CNN

Word embedding