BL(u)E CRAB:

RSSI Detection Pattern Analysis for Flagging System Development

Zhi Qu

What is the Threat?

Stalking

- Making unwanted and persistent phone calls
- Approaching or showing up in places uninvited
- Following and watching the person
- Sending unwanted texts, emails, and social media messages
- Delivering unwanted gifts
- Utilizing technology for monitoring and tracking

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AirTag

- Affordable

Free Engraving

AirTag

$29.00

AirTag

- Affordable
- Accessible

Free Engraving

AirTag

$29.00

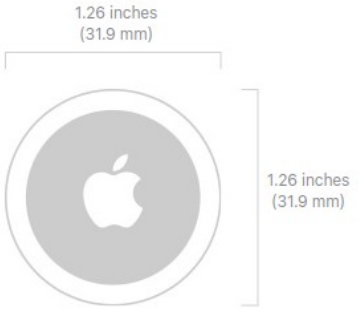
AirTag

- Affordable
- Accessible
- Compact

Free Engraving

AirTag

$29.00



Size
Diameter: 1.26 inches (31.9 mm)
Height: 0.31 inch (8.0 mm)

Weight
0.39 ounce (11 grams)

BL(u)E CRAB

- App
- Scans for BLE nearby
- Logs device info
- Assess risk
- Flags device

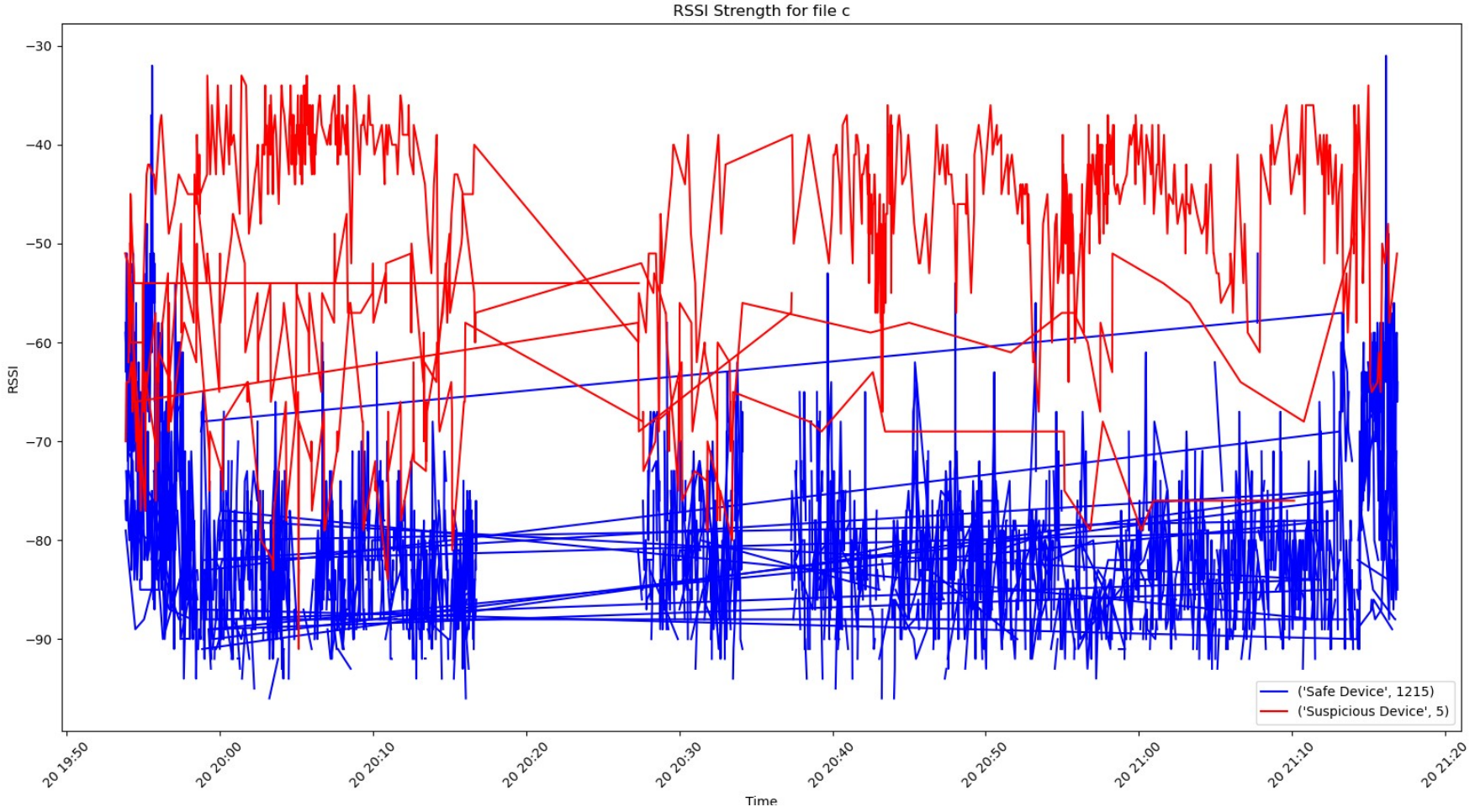
The Code

Reading the data

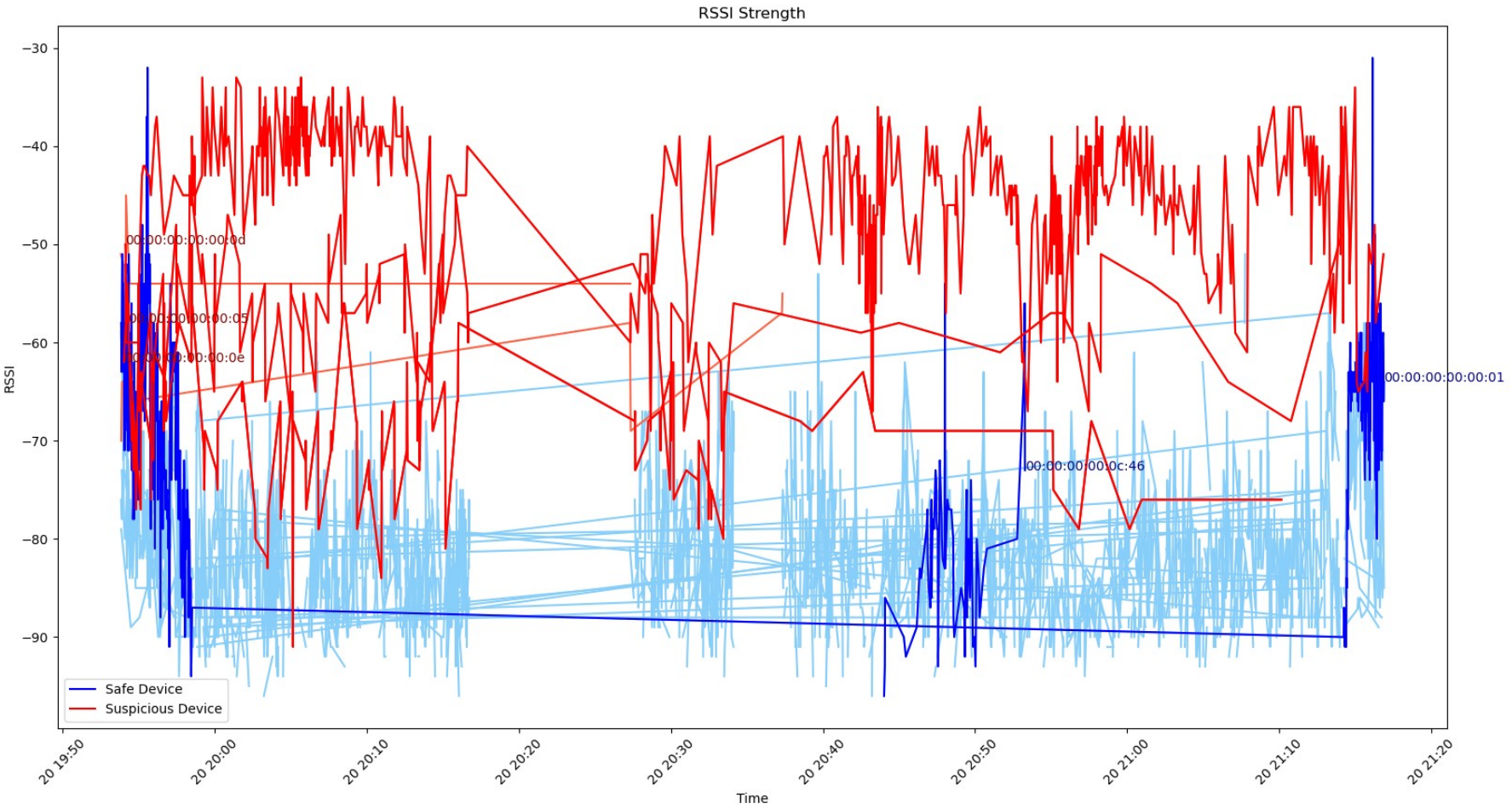
Identifying each mac id

```
36  def sort():
37      mac, rssi, time = make_rssi()
38      fmac = list(set(mac))
39      arssi = []
40      atime = []
41      for i in fmac:
42          r = []
43          t = []
44          for idx, e in enumerate(mac):
45              if i == e:
46                  r.append(rssi[idx])
47                  t.append(time[idx])
48          arssi.append(r)
49          atime.append(t)
```

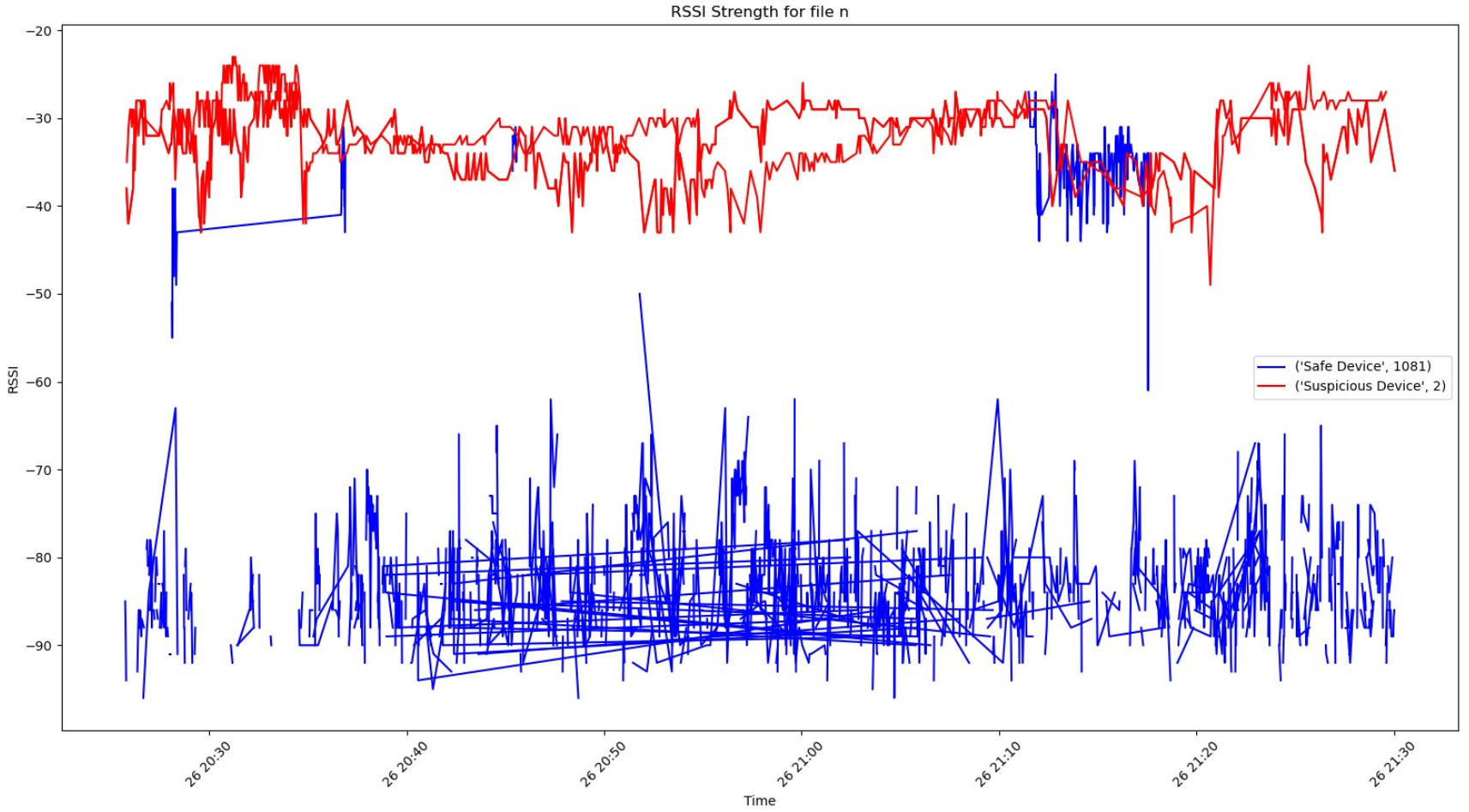
Data file c


RSSI Strength for file c
RSSI
−30
−40
−50
−60
−70
−80
−90
20 19:50
20 20:00
20 20:10
20 20:20
20 20:30
20 20:40
20 20:50
20 21:00
20 21:10
20 21:20
Time
('Safe Device', 1215)
('Suspicious Device', 5)

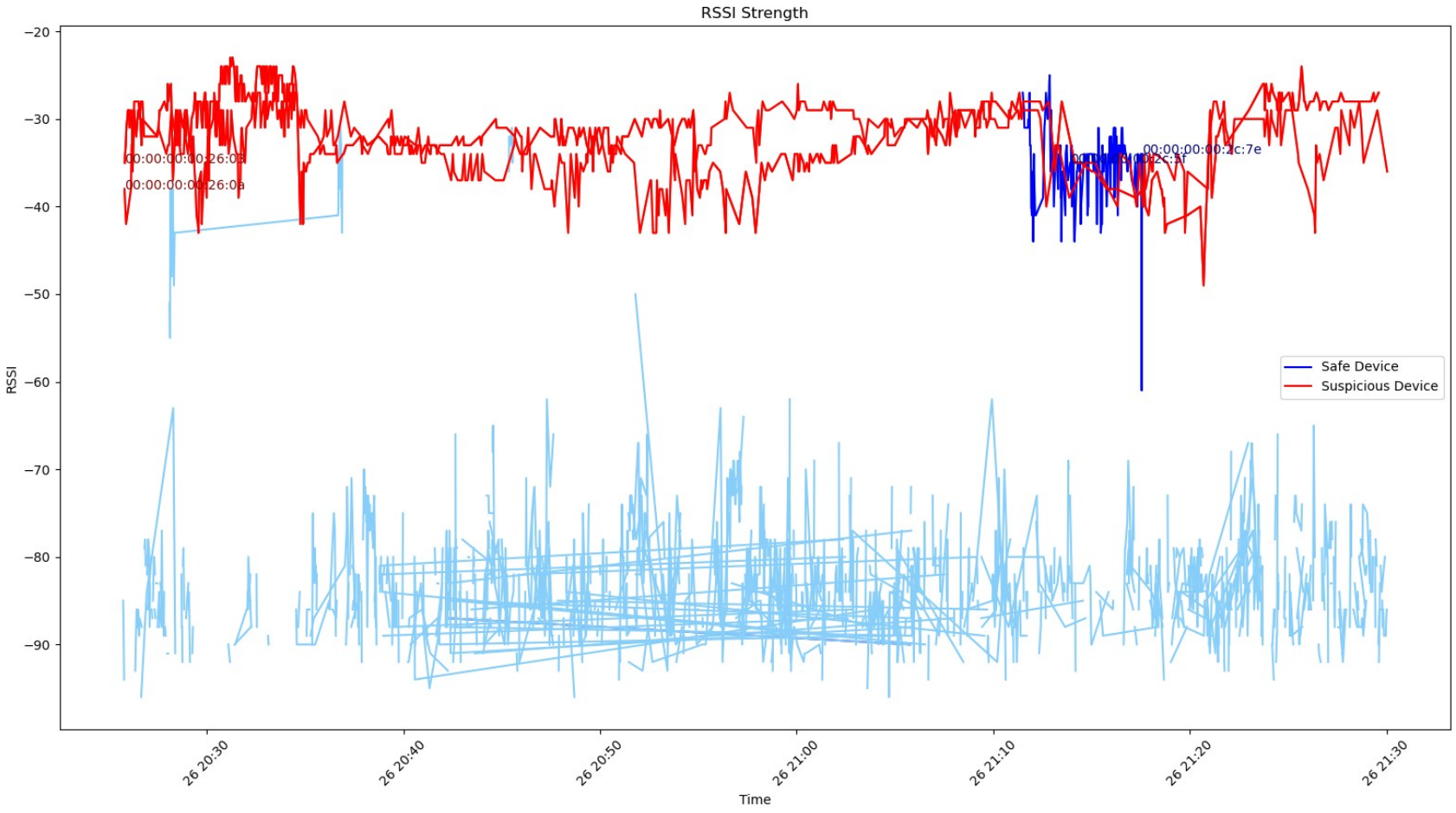
Data file c – long detection



Data file n


RSSI Strength for file n
RSSI
−20
−30
−40
−50
−60
−70
−80
−90
('Safe Device', 1081)
('Suspicious Device', 2)
26 20:30
26 20:40
26 20:50
26 21:00
26 21:10
26 21:20
26 21:30
Time

Data file n - long detection



Time of day – G,N,J