CATANIA project ---------- summary:

1. Raspberry Pi always sends its IP every 1 min, accompanied by the location (not in the same range of 2 meters). It will send also the prediction and its location (not the same prediction in the same range of 2 meters).
2. These parameters are stored in backend admin administration as IP, Tracking, and Predictions.
3. Each Raspberry Pi has a unique ID, status (online or offline), last active (last received location time in backend), mode (moving, idle), and settings (test camera, get location, show tracking map).
   a. Status (from IP), if the last received IP timestamp is more than 1 min → OFFLINE
   b. Last active: the time of last received location if the car is not moving, if moving, put active.
   c. Mode: if current time – last received location time > 1 min → not moving

For the Frontend, we need to show:

1. Map with Filtering (devices and prediction with path line of device)
2. History with Download data in CSV and filtering
3. Device page (device card) … “explained up”, inside settings → test camera and get location
4. Profile for user

Existing codes:

A. python final_code3.py:
- Send device ID + IP every 1 minute, always.
- Send location + ID + only if the device moves more than 2 meters.
- Send prediction + ID + location only if prediction changes and device moved more than 2 meters.

B. python test_camera.py (for test camera of device)