

## วิธีติดตั้งระบบ Pallet Detector

ในที่นี้ใช้

- Windows 11 OS
- Laragon 6.0 ในการรัน Visual server

กรณีต้องการทดสอบระบบบน Windows OS ให้ติดตั้ง Lib ต่างๆ ดังนี้

1. อัพเกรด pip ให้เป็น version ล่าสุด ด้วยคำสั่ง

pip install --upgrade pip

```
for parsed_line in parser.parse(filename, constraint):
    File "C:\laragon\bin\python\python-3.10\lib\site-packages\pip\_internal\req\req_file.py", line 328, in parse
        yield from self._parse_and_recurse(filename, constraint)
    File "C:\laragon\bin\python\python-3.10\lib\site-packages\pip\_internal\req\req_file.py", line 333, in _parse_and_recurse
        for line in self._parse_file(filename, constraint):
    File "C:\laragon\bin\python\python-3.10\lib\site-packages\pip\_internal\req\req_file.py", line 364, in _parse_file
        _, content = get_file_content(filename, self._session)
    File "C:\laragon\bin\python\python-3.10\lib\site-packages\pip\_internal\req\req_file.py", line 537, in get_file_content
        content = auto_decode(f.read())
    File "C:\laragon\bin\python\python-3.10\lib\site-packages\pip\_internal\utils\encoding.py", line 34, in auto_decode
        return data.decode()
    File "C:\laragon\bin\python\python-3.10\lib\encodings\cp874.py", line 15, in decode
        return codecs.charmap_decode(input,errors,decoding_table)
UnicodeDecodeError: 'charmap' codec can't decode byte 0x89 in position 99: character maps to <undefined>

[notice] A new release of pip available: 22.2.2 -> 25.3
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\laragon\www\pallet_detector(main -> origin)
\ pip install --upgrade pip
Requirement already satisfied: pip in c:\laragon\bin\python\python-3.10\lib\site-packages (22.2.2)
Collecting pip
  Downloading pip-25.3-py3-none-any.whl (1.8 MB)
----- 1.8/1.8 MB 943.1 kB/s eta 0:00:00
Installing collected packages: pip
  Attempting uninstall: pip
    Found existing installation: pip 22.2.2
    Uninstalling pip-22.2.2:
      Successfully uninstalled pip-22.2.2
Successfully installed pip-25.3

C:\laragon\www\pallet_detector(main -> origin)
\ pip install --upgrade pip
```

2. ติดตั้ง Lib และส่วนที่เกี่ยวข้อง ด้วยคำสั่ง

- pip install -r requirements/requirements.txt

จากนั้นรอสักครู่ระบบจะติดตั้ง Lib ต่างๆ ให้รอจนหน้าจอกลับมาที่ Prompt

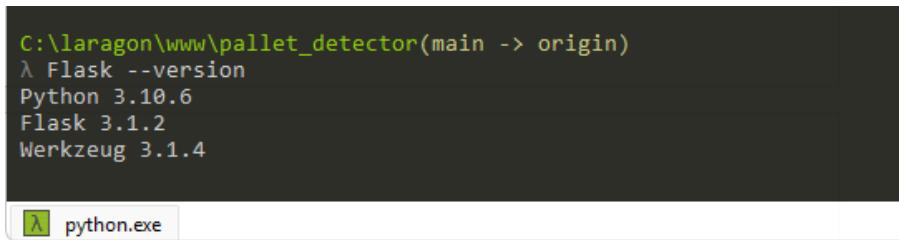
\*\*ระบบอาจจะฟ้อง ERROR: Failed building wheel for RPi.GPIO ไม่ต้องสนใจเนื่องจาก เป็นการติดตั้งบน Windows ซึ่งไม่มีขา GPIO อยู่แล้ว

3. กรณีติดตั้ง Lib ไม่ผ่าน ให้พิมพ์คำสั่งติดตั้งเอง

- pip install Flask==3.0.0 Flask-CORS==4.0.0 PyMySQL==1.1.0 opencv-python==4.8.1.78 gpiozero==2.0.1 requests==2.31.0

หรือ # ติดตั้งทั้งหมด (รวม GPIO libraries)

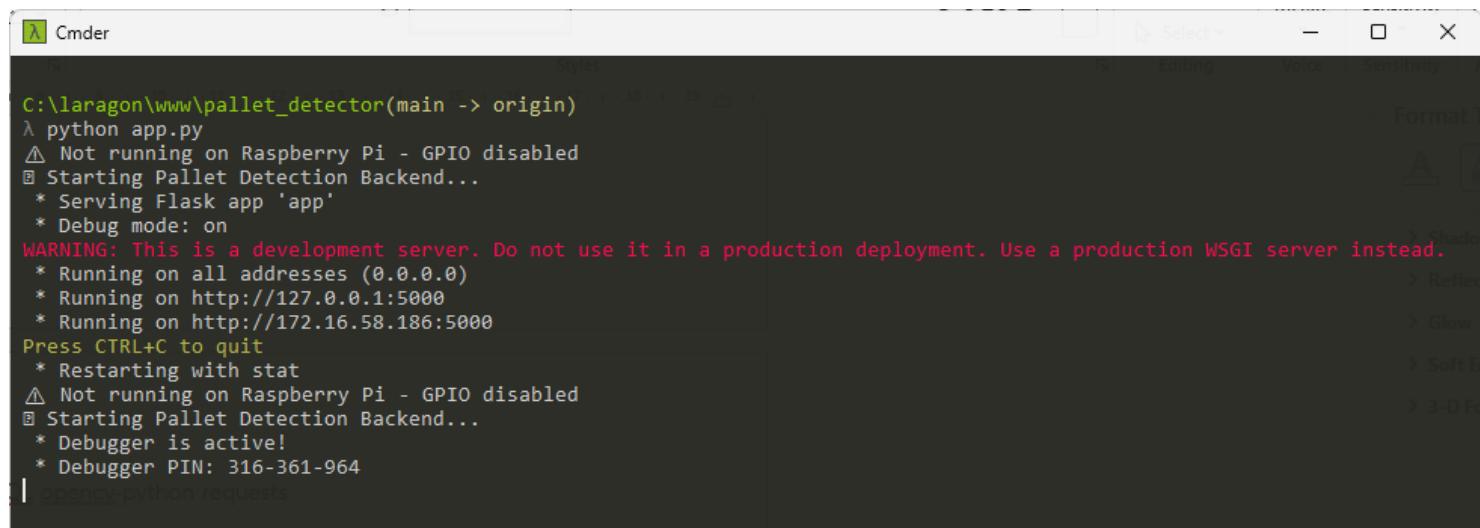
pip install Flask Flask-CORS PyMySQL opencv-python requests gpiozero RPi.GPIO



```
C:\laragon\www\pallet_detector(main -> origin)
λ Flask --version
Python 3.10.6
Flask 3.1.2
Werkzeug 3.1.4
```

หลังติดตั้งเสร็จทดสอบบนเว็บดู Flask --version หากแสดงผลตามรูปด้านบนแสดงว่าติดตั้งเรียบร้อย จากนั้นพิมพ์คำสั่ง

- python app.py



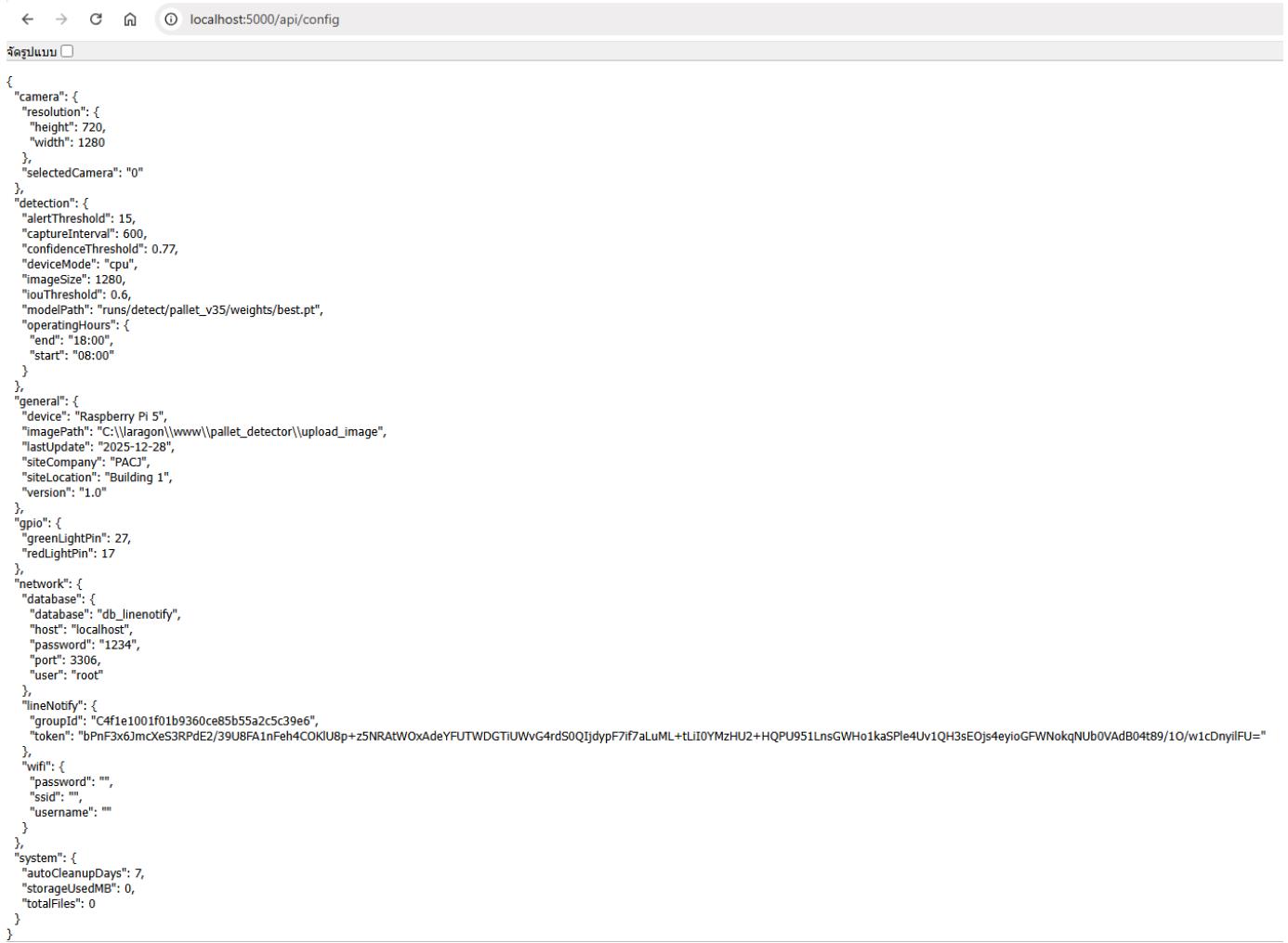
```
C:\laragon\www\pallet_detector(main -> origin)
λ python app.py
△ Not running on Raspberry Pi - GPIO disabled
▣ Starting Pallet Detection Backend...
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.16.58.186:5000
Press CTRL+C to quit
* Restarting with stat
△ Not running on Raspberry Pi - GPIO disabled
▣ Starting Pallet Detection Backend...
* Debugger is active!
* Debugger PIN: 316-361-964
```

ระบบจะรันเซิฟเวอร์ Flask ถ้าติดตั้งสมบูรณ์จะแสดงผลตามรูปด้านบน

หมายเหตุ:

- gpiozero สำหรับ GPIO (Pi only)
- opencv-python สำหรับกล้อง
- PyMySQL สำหรับ MySQL

จากนั้นทดสอบเปิดหน้า <http://localhost:5000/api/config> หรือใช้คำสั่ง CURL จะได้ผลลัพธ์ตามรูปด้านล่าง



The screenshot shows a browser window with the URL `localhost:5000/api/config` in the address bar. The page content displays a large JSON object representing system configuration. The JSON structure includes sections for camera, detection, general, gpio, network, database, lineNotify, wifi, and system. Key values include camera resolution (720x1280), selected camera (0), detection alert threshold (15), capture interval (600ms), confidence threshold (0.77), device mode (cpu), image size (1280x1280), and operating hours (from 08:00 to 18:00). The general section provides device information (Raspberry Pi 5), image path, last update (2025-12-28), site company (PACJ), site location (Building 1), and version (1.0). The gpio section defines green and red light pins. The network section includes a database connection (host localhost, port 3306, user root) and a lineNotify entry with a token. The wifi section contains empty password, ssid, and username fields. The system section shows auto cleanup days (7), storage used (0MB), and total files (0).

```
{
  "camera": {
    "resolution": {
      "height": 720,
      "width": 1280
    },
    "selectedCamera": "0"
  },
  "detection": {
    "alertThreshold": 15,
    "captureInterval": 600,
    "confidenceThreshold": 0.77,
    "deviceMode": "cpu",
    "imageSize": 1280,
    "iouThreshold": 0.6,
    "modelPath": "runs/detect/pallet_v35/weights/best.pt",
    "operatingHours": {
      "end": "18:00",
      "start": "08:00"
    }
  },
  "general": {
    "device": "Raspberry Pi 5",
    "imagePath": "C:\\laragon\\www\\pallet_detector\\upload_image",
    "lastUpdate": "2025-12-28",
    "siteCompany": "PACJ",
    "siteLocation": "Building 1",
    "version": "1.0"
  },
  "gpio": {
    "greenLightPin": 27,
    "redLightPin": 17
  },
  "network": {
    "database": {
      "database": "db_linenotify",
      "host": "localhost",
      "password": "1234",
      "port": 3306,
      "user": "root"
    },
    "lineNotify": {
      "groupId": "C4f1e1001f01b9360ce85b55a2c5c39e6",
      "token": "bPnF3x6JmcXe53RPdE2/39U8FA1nFeh4COKIU8p+z5NRAtW0xAdeYFUTWDGTlUWvG4rdS0QIjdypF7if7aLuML+tLII0YMzHU2+HQPU951LnsGWHo1kaSPle4Uv1QH3sEOjs4eyioGFWNokqNuB0VAdB04t89/10/w1cDnylfU="
    },
    "wifi": {
      "password": "",
      "ssid": "",
      "username": ""
    }
  },
  "system": {
    "autoCleanupDays": 7,
    "storageUsedMB": 0,
    "totalFiles": 0
  }
}
```

HTTP Pallet Detector / test connect db

POST http://localhost:5000/api/test/database

Docs Params Authorization Headers (9) Body ● Scripts Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL JSON

Schema Beautify

```
1 {
2   "host": "localhost",
3   "user": "root",
4   "password": "1234",
5   "database": "db_pact_api",
6   "port": 3306
7 }
```

Body Cookies Headers (6) Test Results

200 OK 7 ms 376 B Save Response

{ } JSON Preview Visualize

```
1 {
2   "details": {
3     "database": "db_pact_api",
4     "host": "localhost",
5     "version": "8.0.30"
6   },
7   "message": "Database connection successful!",
8   "success": true
9 }
```

HTTP Pallet Detector / test connect db

GET http://localhost:5000/api/system/storage

Docs Params Authorization Headers (9) Body ● Scripts Settings Cookies

Query Params

	Key	Value	Description	Bulk Edit
	Key	Value	Description	

Body Cookies Headers (6) Test Results

200 OK 5 ms 391 B Save Response

{ } JSON Preview Visualize

```
1 {
2   "data": {
3     "freeDiskGB": 24.23,
4     "path": "C:\\laragon\\www\\pallet_detector\\upload_image",
5     "totalDiskGB": 235.78,
6     "totalFiles": 0,
7     "usedMB": 0.0
8   },
9   "success": true
10 }
```



