

Installation Report – Heavy Machinery Monitoring System

Project Setup Summary

Project Structure

- heavy_machinery_monitoring/
 - checkbackend/ -> Django + PostgreSQL backend
 - nmapp/ -> React Native mobile app

Backend Installation (Django + PostgreSQL)

1. Environment Setup

- Python Version: Python 3.11.9
- **Virtual Environment created with:** `py -3.11 -m venv venv`
- Activated with: `.\venv\Scripts\activate`
- PostgreSQL ≥ 13
- Django version: 5.2.1
- requirements.txt:
 - `Django==5.2.1`
 - `djangorestframework==3.15.1`
 - `psycopg2-binary==2.9.9`
 - `djangorestframework-simplejwt==5.3.1`
 - `channels==4.1.0`

- django-extensions==3.2.3
- django-cors-headers==4.3.1

2. Installed Packages

- Installed via: pip install -r requirements.txt
- Manually installed: pip install pandas
pip install reportlab
- Verified:
 - Django 5.2.1
 - Pandas
 - reportlab

3. Database Configuration (in settings.py)

```
DATABASES = {  
    'default': {  
        'ENGINE': 'django.db.backends.postgresql',  
        'NAME': 'machinery_db',  
        'USER': 'postgres',  
        'PASSWORD': 'your_password',  
        'HOST': 'localhost',  
        'PORT': '5432',  
    }  
}
```

4. Migrations

- `python manage.py makemigrations`
- `python manage.py migrate`

5. Run Server

- `python manage.py runserver`
- Visit: `http://127.0.0.1:8000/`

6. Create Django Superuser (Optional)

- `python manage.py createsuperuser`
- Admin Panel: `http://127.0.0.1:8000/admin/`

Frontend Installation (React Native)

1. Environment Setup

- Node.js ≥ 16
- Expo CLI
- Android Studio / Xcode
- VS Code (recommended)

2. Installation Steps

- `cd frontend/`
- `npm install`
- `npx expo install`

- **Ensure required packages are installed:**

```
npm install axios react-navigation react-native-chart-kit @react-navigation/native  
@react-navigation/native-stack @react-native-async-storage/async-storage
```

3. API Configuration (config.js)

```
const BASE_URL = "http://192.168.1.X:8000/api"; // replace with local IP
```

4. Run React Native App

- **npx expo start**