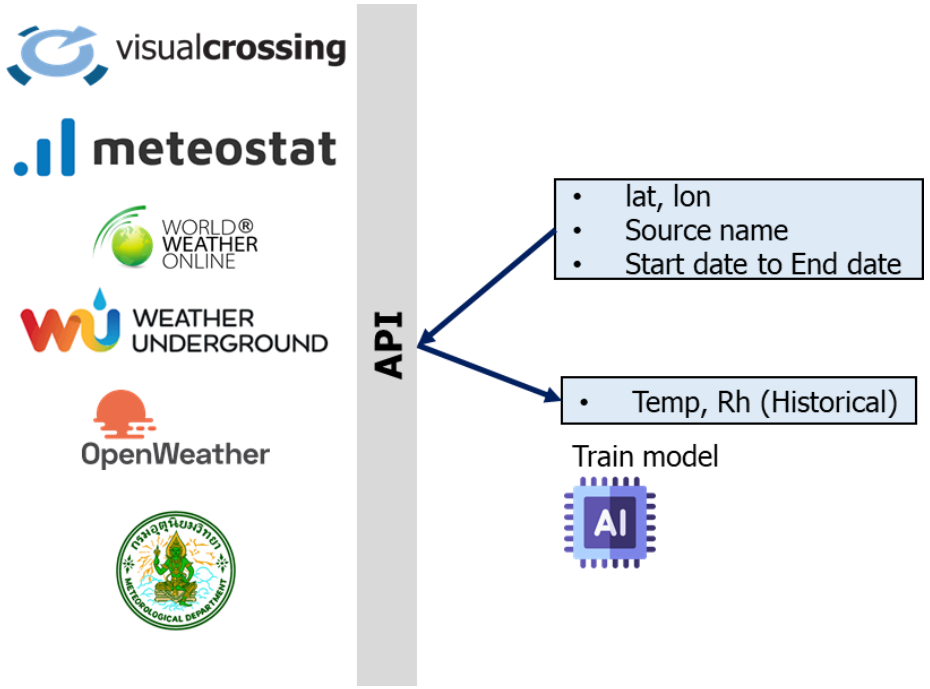
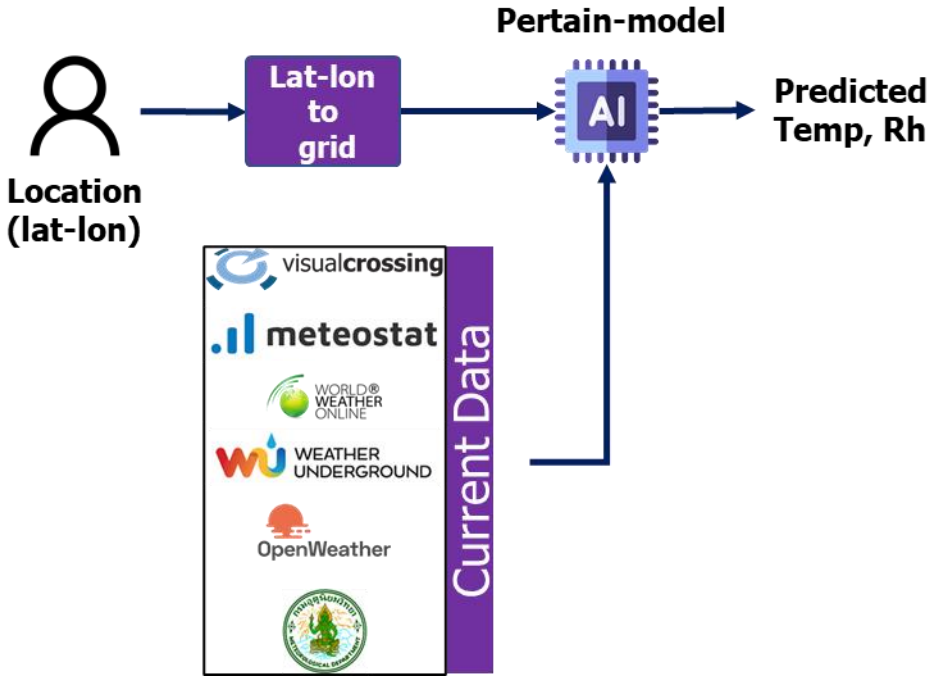
Training model



Real-time Prediction



GitHub: https://github.com/SukritJaAIproject/weather_api
Google Colab: https://colab.research.google.com/drive/1jN9PQjwhKO2xiZcnYNwovau26v-ojEyg?usp=sharing
Dataset: https://drive.google.com/drive/folders/1IK36-94dYoYeX2K1xfx1qqHDFZ_o3yKU?usp=sharing

Training Process

Model's Features/Input — **Done**

Meteostat

Lat-lon → his_data_point.py → T, Rh (Estimate data)

Lat-lon → station_his_data.py → T, Rh (Actual data)

visualcrossing

Lat-lon → Visualcross_hist.py → T, Rh (Estimate data)

OpenWeather

Lat-lon → open_his_data.py → T, Rh (Estimate data)

WEATHER UNDERGROUND

Lat-lon → wg_his_data.py → T, Rh (Actual data)

WORLD WEATHER ONLINE

Lat-lon → wwo_his_data.py → T, Rh (Estimate data)

Lat-lon → tmd_forecast.py → T, Rh (Estimate data)

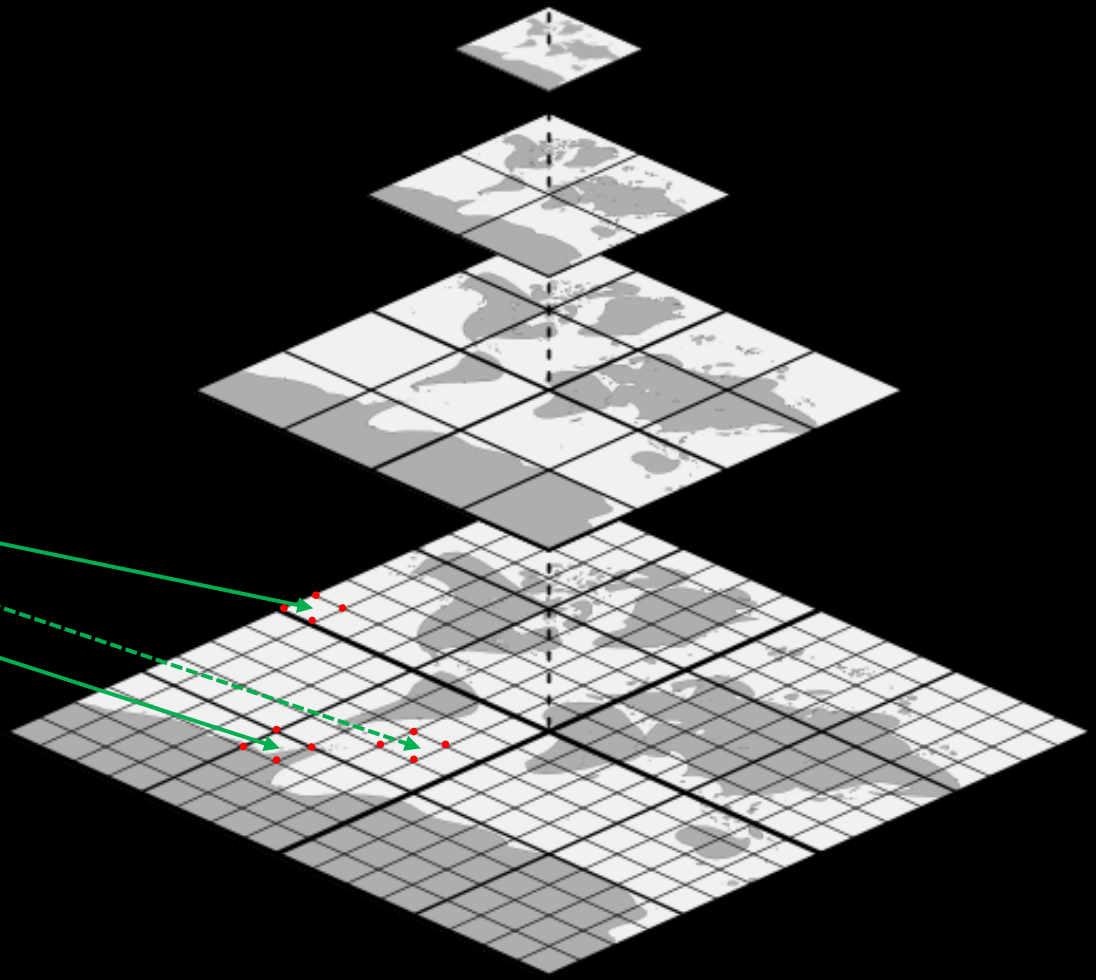
สามารถเก็บข้อมูลเพื่อเอามา train model ภายหลังได้

Historical data

Update model

InProgress

AI



Real-time Process

Done

Meteostat

Lat-lon → his_data_point.py → T, Rh (Estimate data)

Lat-lon → nearby_stations_get_data.py → T, Rh (Actual data)

visualcrossing

Lat-lon → Visualcross_current.py → T, Rh (Estimate data)

OpenWeather

Lat-lon → open_his_data.py → T, Rh (Estimate data)

WEATHER UNDERGROUND

Lat-lon → wunderground_current.py → T, Rh (Actual data)

WORLD® WEATHER ONLINE

Lat-lon → wwo_curr_data.py → T, Rh (Estimate data)

Lat-lon → current_tmd_data.py → T, Rh (Estimate data)

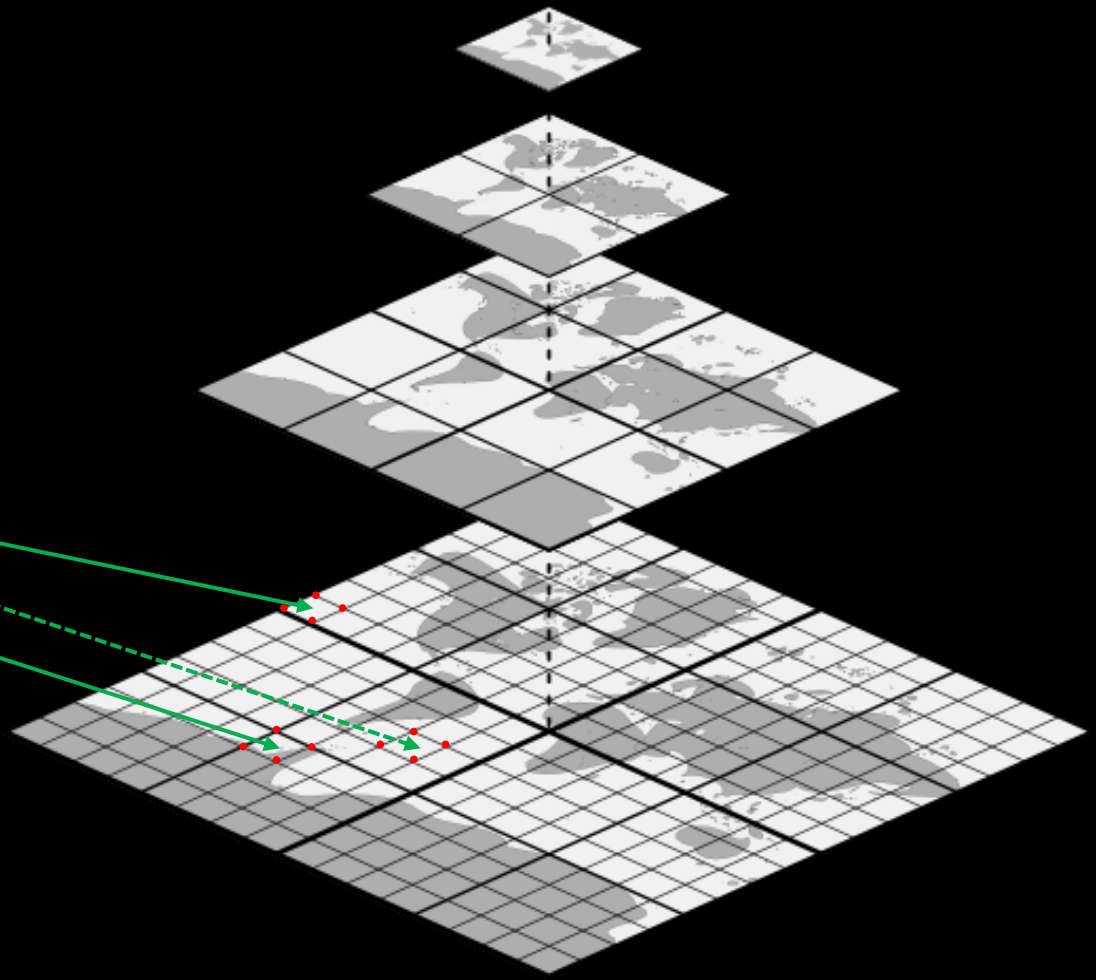
สามารถเก็บข้อมูลเพื่อเอามา train model ภายหลังได้

Current data

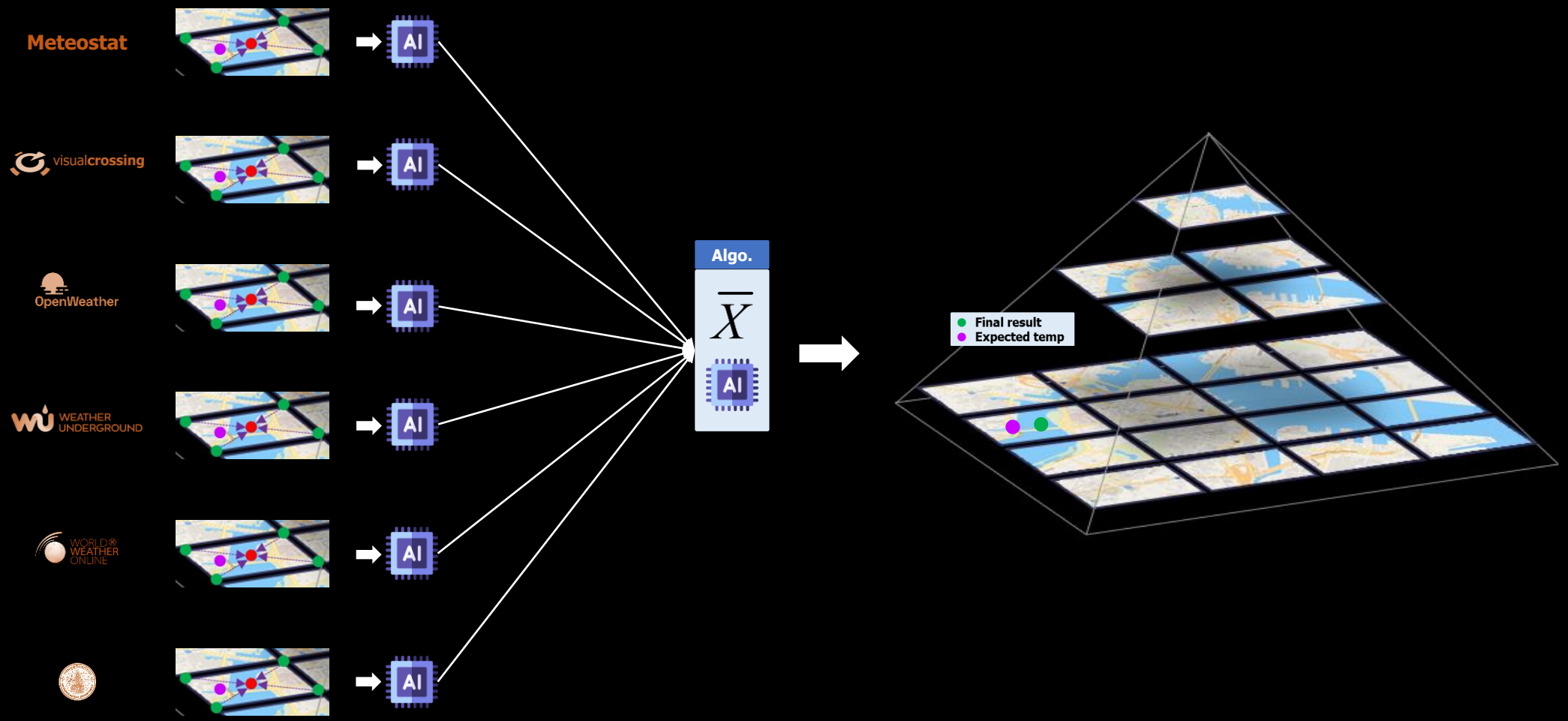
Pre-trained model

InProgress

AI

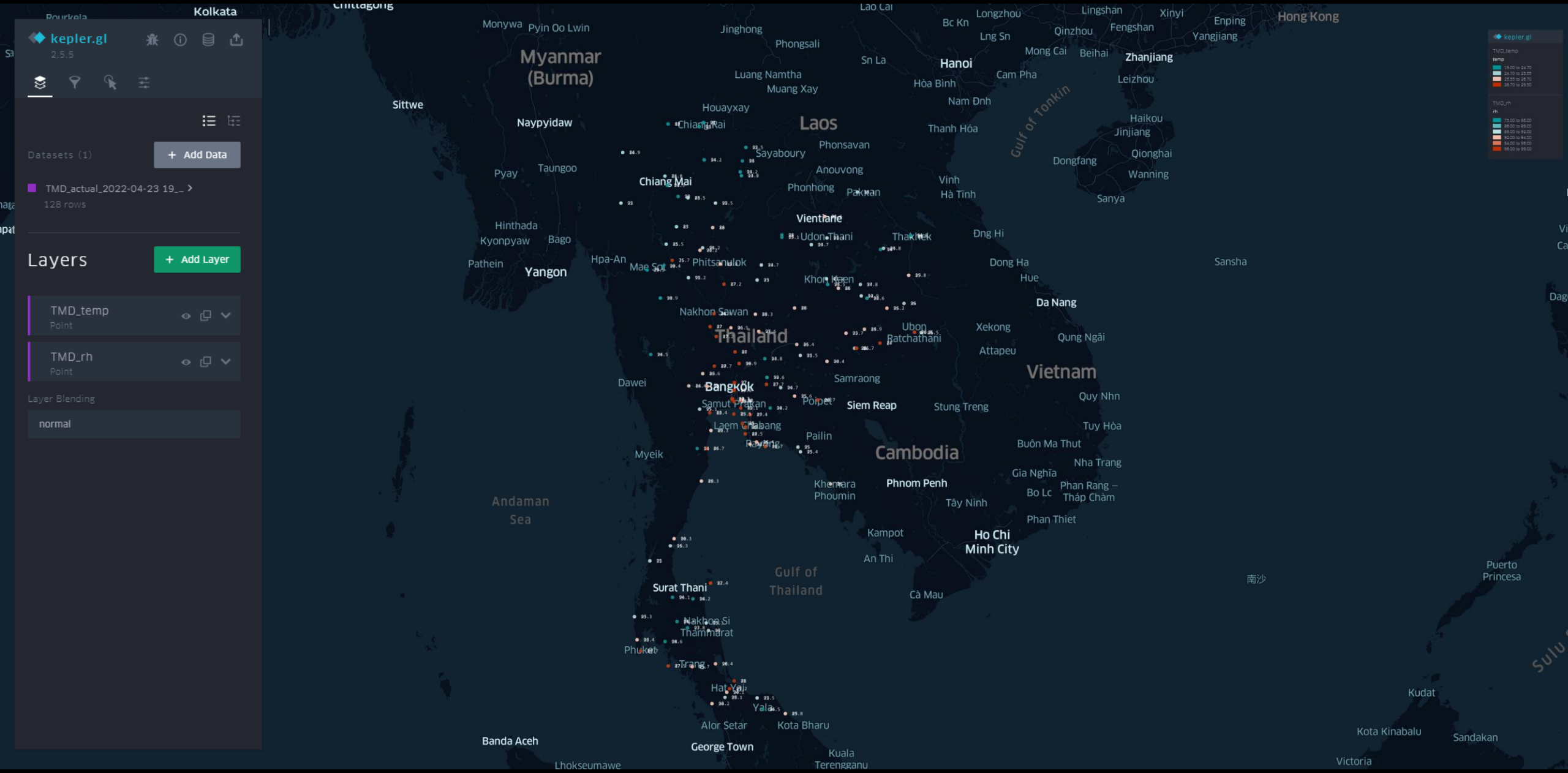


Algorithm


Meteostat
visualcrossing
OpenWeather
WEATHER UNDERGROUND
WORLD WEATHER ONLINE
AI
AI
AI
AI
AI
AI
Algo.
$\overline{X}$
AI
Final result
Expected temp

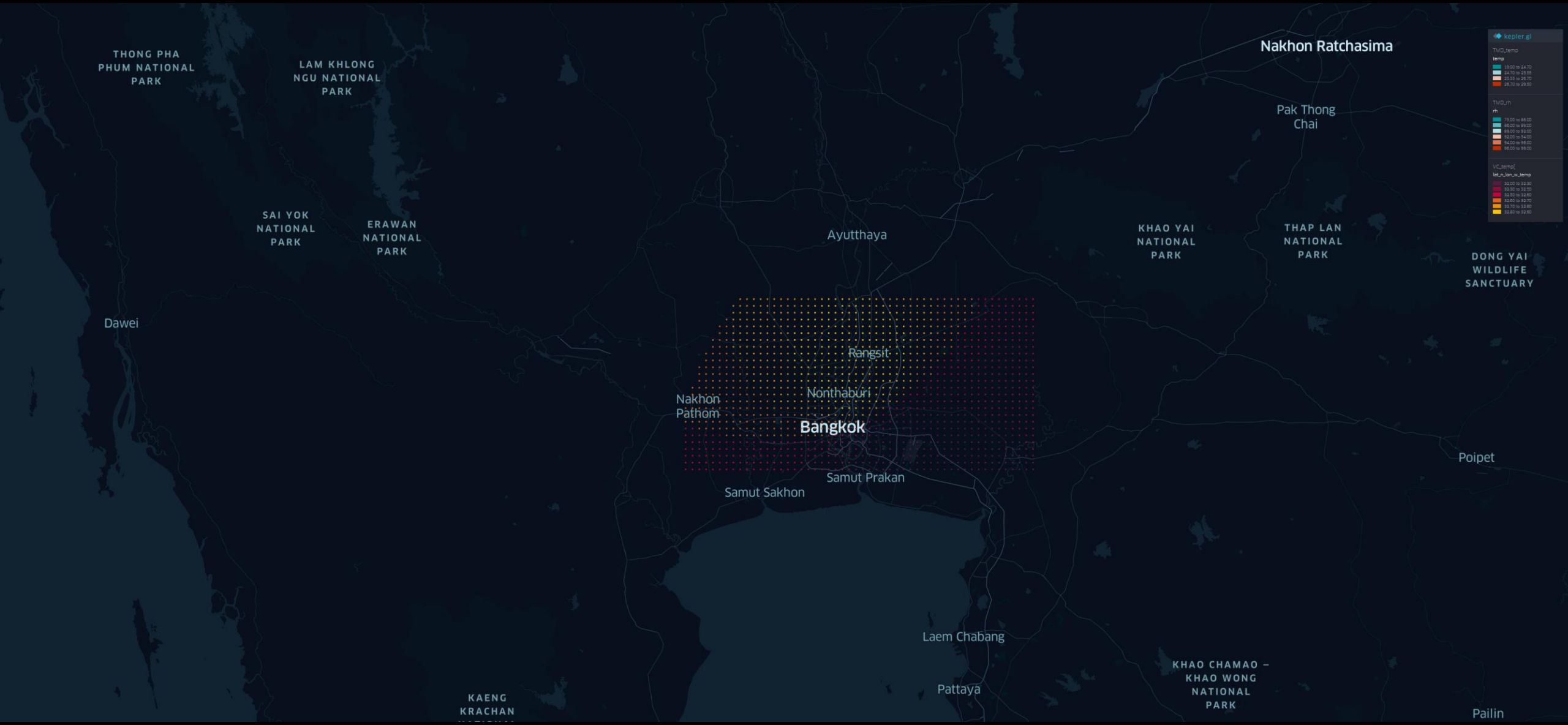
TMD : actual value from stations

Visualization



Visualcrossing

Visualization



Visualcrossing & TMD

Visualization

Result

Test site : EECU

```
openweather_api:  datetime:  2022-04-23 17:04 Temp:  36.0875 Rh:  46.25
meteostat actual:  datetime:  2022-04-23 17:00:00 Temp:  33.8 Rh:  57.0
meteostat predict:  datetime:  2022-04-23 17:00:00 Temp:  33.8 Rh:  57.0
Visualcrossing:  datetime:  16:00:00 Temp:  34.9 Rh:  49.885
wwo:  datetime:  2022-04-23_17:04:10 Temp:  36.0 Rh:  43.0
{'Estimate_temp&rh': [34.9175, 50.626999999999995], 'Actual': {'lat': 13.92846, 'lon': 99.985649, 'mean temp': 33.25, 'mean rh': 62.75}}
```