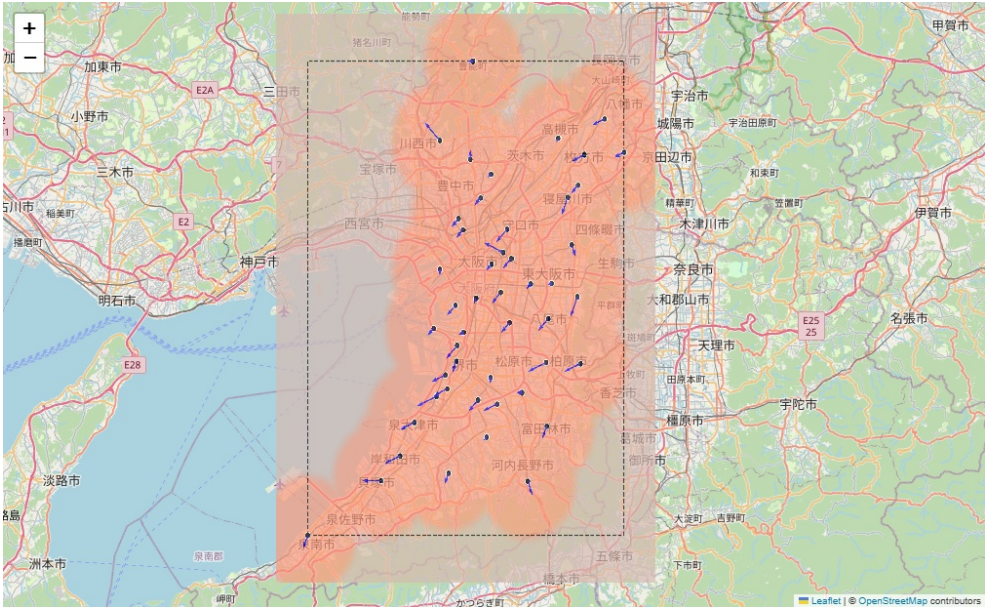


# LightGBM Interpolation - 大阪府 - 2025/5/12 19H

$$\hat{y} = \frac{1}{T} \sum_{t=1}^T f_t(x)$$

$\hat{y}$ : predicted value (e.g., O<sub>x</sub> concentration)  
 $T$ : total number of trees in the forest  
 $f_t(x)$ : prediction of tree  $t$  for input  $x$   
 $x$ : input features (e.g., NO, NO<sub>2</sub>, U, V, longitude, latitude)

Each tree is trained on a bootstrap sample  
and uses a random subset of features at each split.  
Final prediction is the average of all tree outputs.



RMSE	MAE	R <sup>2</sup>
0.00468	0.00314	0.589

