

# IDW - 大阪府 - 2025/5/12 19H

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

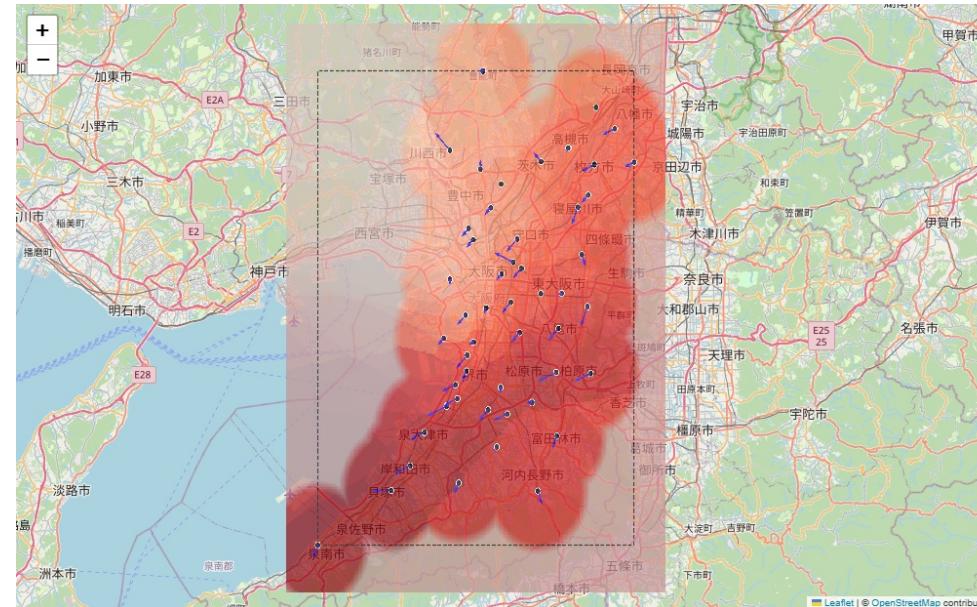
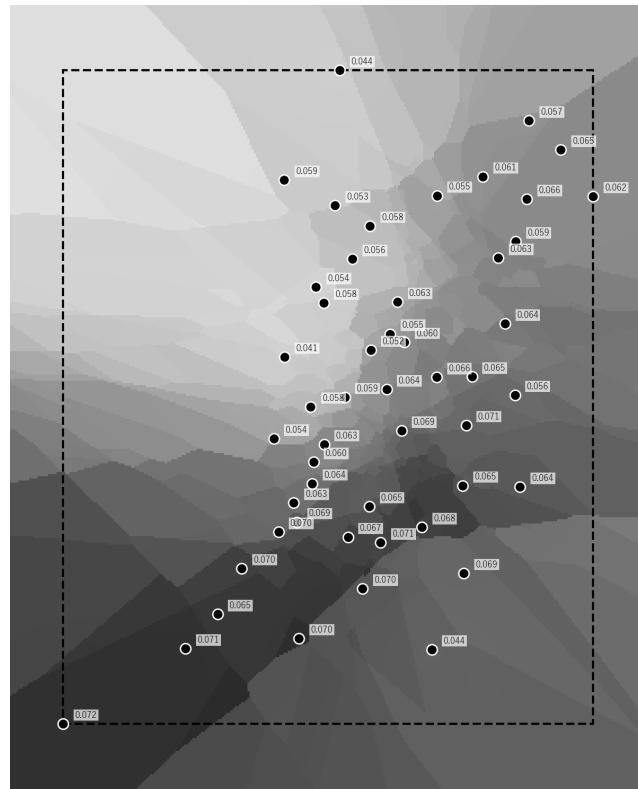
$\hat{y}$ : predicted value (e.g., O<sub>x</sub> concentration)

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.



k	power	RMSE	MAE	R <sup>2</sup>
9	0.05	0.00582	0.00399	0.344
9	0.10	0.00582	0.00399	0.344
8	0.05	0.00582	0.00395	0.342
8	0.10	0.00582	0.00395	0.342
9	0.70	0.00583	0.00402	0.340
9	0.80	0.00584	0.00403	0.338
8	0.70	0.00584	0.00400	0.338
9	0.90	0.00585	0.00405	0.337
8	0.80	0.00585	0.00401	0.336
9	1.00	0.00585	0.00406	0.335
8	0.90	0.00585	0.00402	0.335
8	1.00	0.00586	0.00404	0.334
10	0.10	0.00587	0.00407	0.331
10	0.05	0.00587	0.00407	0.331
10	0.70	0.00588	0.00408	0.330
10	0.80	0.00588	0.00409	0.330
10	0.90	0.00588	0.00410	0.329
10	1.00	0.00589	0.00411	0.328

