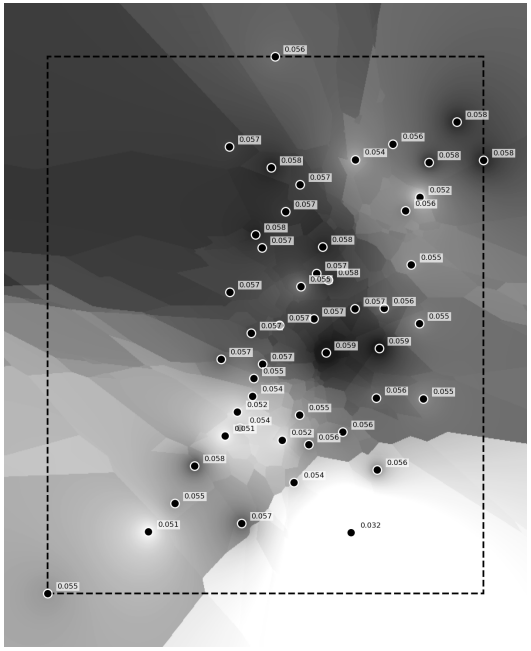
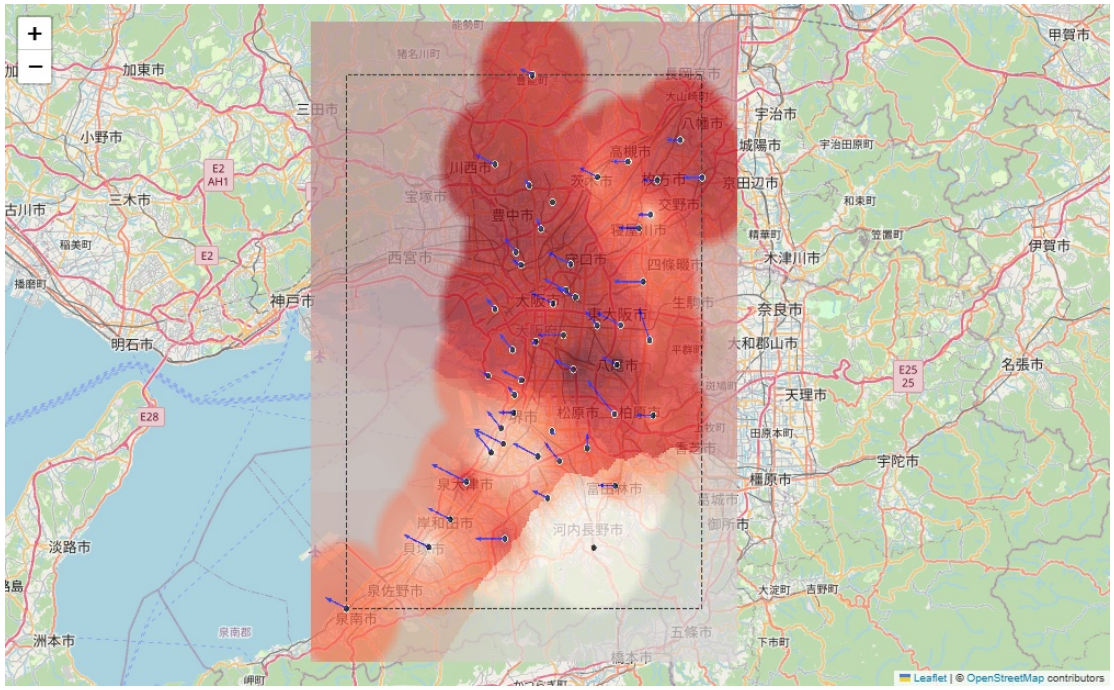
IDW Cross-validation Report

$$\hat{z}(x_0) = \frac{\sum_{i=1}^{k} w_i z_i}{\sum_{i=1}^{k} w_i}, \quad \text{where } w_i = \frac{1}{d(x_0, x_i)^p}$$

x_0: location to interpolate
x_i: known data point location
z_i: known value at x_i
$d(x_0, x_i)$: distance between x_0 and x_i
w_i: weight of z_i
p: power parameter (controls weight decay)
k: number of nearest neighbors





k	p	RMSE	MAE	R²
5	1.00	0.00386	0.00185	0.023
5	1.20	0.00386	0.00186	0.022
5	1.50	0.00386	0.00187	0.022
5	2.00	0.00386	0.00189	0.020
6	1.00	0.00381	0.00190	0.047
6	1.20	0.00381	0.00191	0.046
6	1.50	0.00382	0.00191	0.044
6	2.00	0.00382	0.00192	0.040
7	1.00	0.00380	0.00188	0.053
7	1.20	0.00380	0.00189	0.052
7	1.50	0.00380	0.00190	0.050
7	2.00	0.00381	0.00191	0.046
9	1.00	0.00384	0.00189	0.034
9	1.20	0.00383	0.00190	0.035
9	1.50	0.00383	0.00191	0.035
9	2.00	0.00384	0.00193	0.033