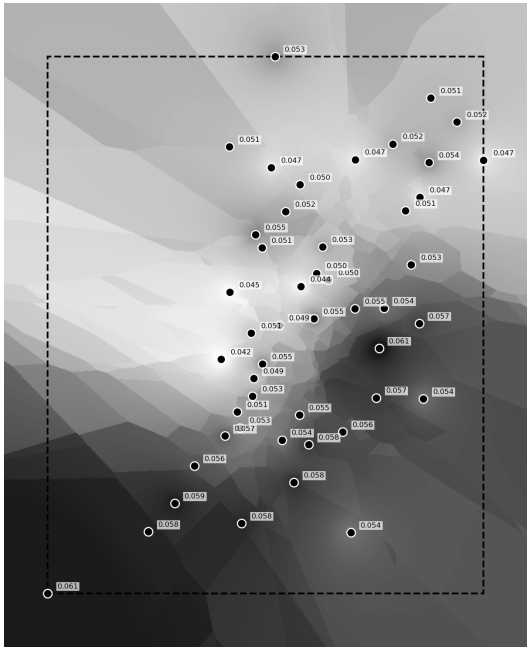
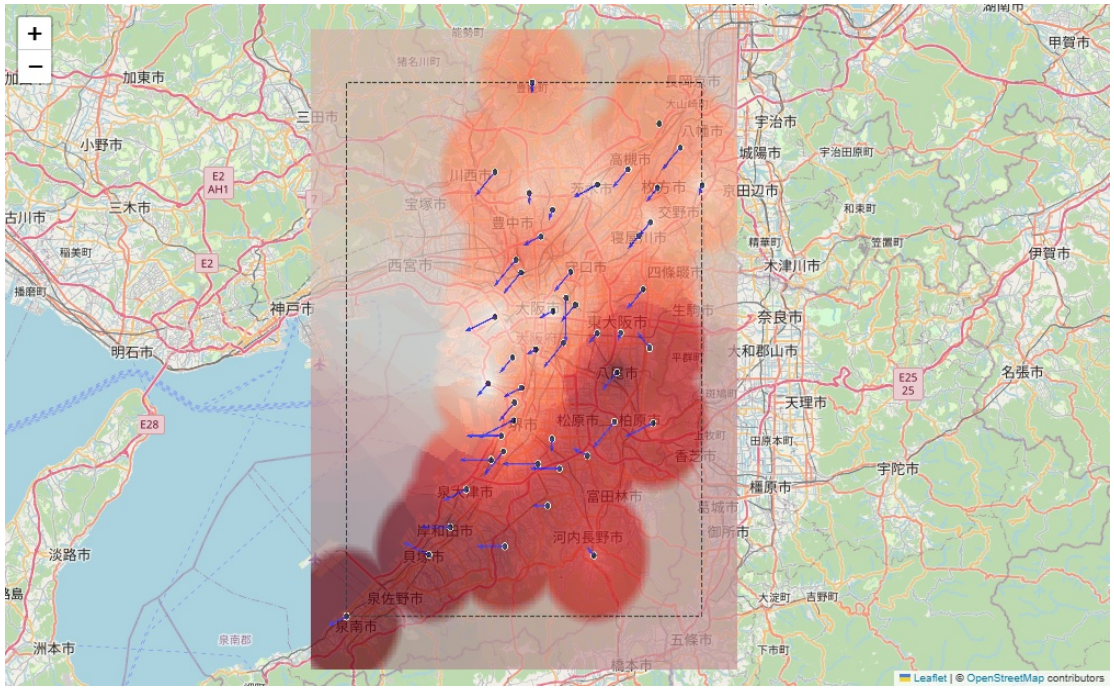
IDW Cross-validation Report

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

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	0.00327	0.00248	0.397
5	1.20	0.00328	0.00250	0.393
5	1.50	0.00329	0.00255	0.386
5	2.00	0.00333	0.00262	0.371
6	1.00	0.00321	0.00249	0.416
6	1.20	0.00322	0.00250	0.414
6	1.50	0.00324	0.00252	0.408
6	2.00	0.00328	0.00259	0.393
7	1.00	0.00326	0.00257	0.399
7	1.20	0.00326	0.00257	0.399
7	1.50	0.00327	0.00258	0.397
7	2.00	0.00329	0.00262	0.388
9	1.00	0.00323	0.00247	0.412
9	1.20	0.00322	0.00248	0.413
9	1.50	0.00323	0.00250	0.411
9	2.00	0.00326	0.00256	0.401