IDW - 2025/5/12 19H

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

 x_0 : location to interpolate

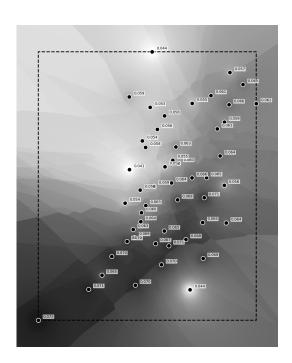
xi: known data point location

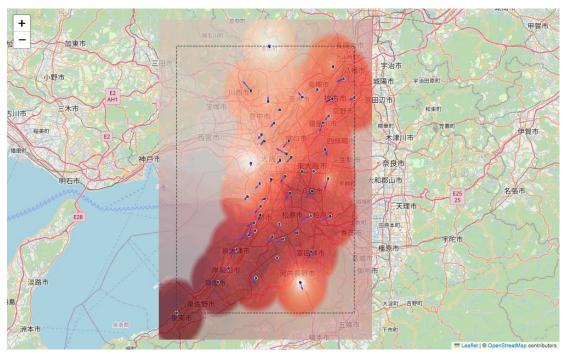
 z_i : known value at x_i

 $d(x_0, x_i)$: 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	рΙ	RMSE	MAE	R²
5	1.00	0.00607	0.00429	0.286
5	1.20	0.00607	0.00431	0.285
5	1.50	0.00608	0.00434	0.283
5	2.00	0.00610	0.00438	0.278
6	1.00	0.00592	0.00416	0.321
6	1.20	0.00593	0.00419	0.318
6	1.50	0.00596	0.00424	0.312
6	2.00	0.00600	0.00431	0.302
7	1.00	0.00593	0.00412	0.318
7	1.20	0.00594	0.00415	0.316
7	1.50	0.00595	0.00420	0.312
7	2.00	0.00599	0.00427	0.303
9	1.00	0.00585	0.00406	0.335
9	1.20	0.00587	0.00410	0.332
9	1.50	0.00590	0.00415	0.325
9	2.00	0.00595	0.00425	0.312

