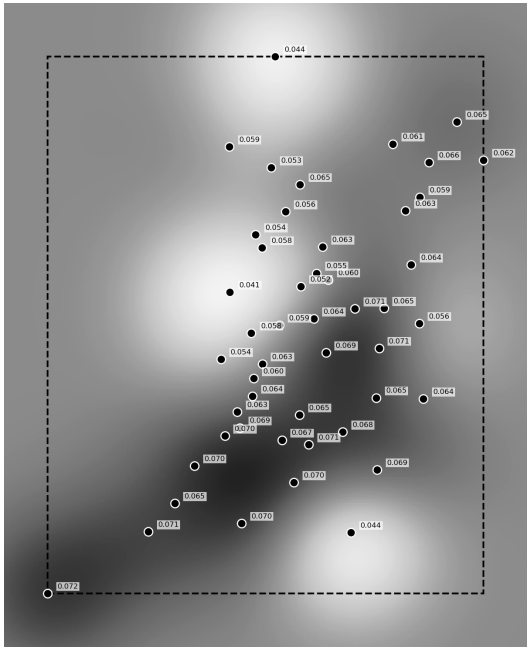
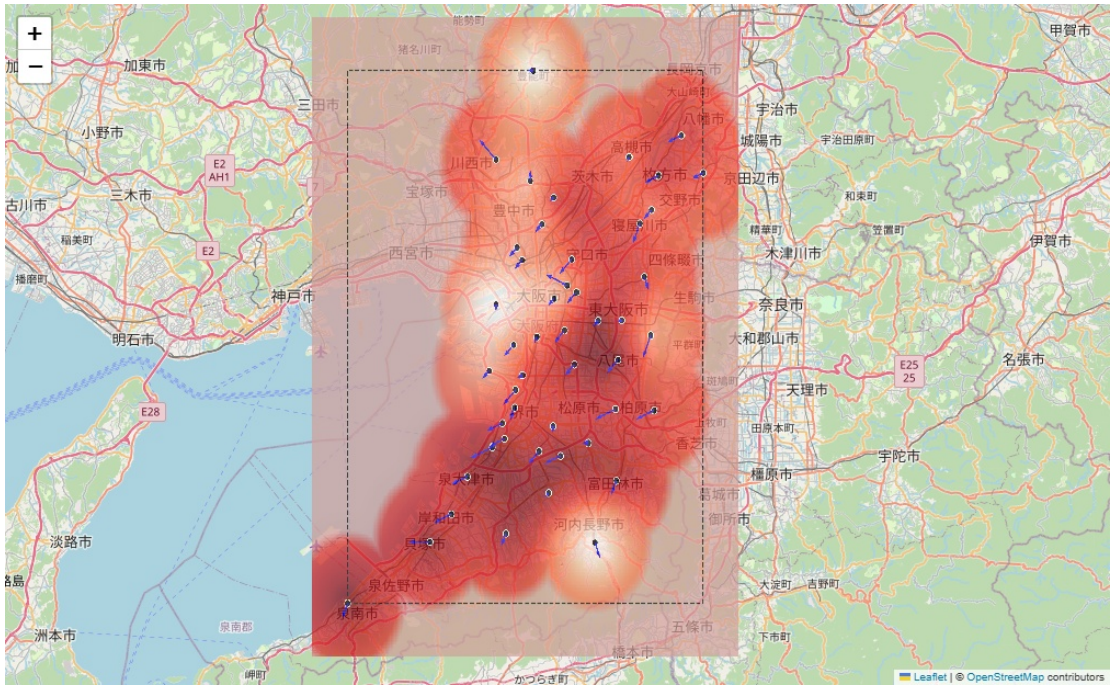
Universal Kriging Interpolation - 2025/5/12 19H

$$\hat{z}(x_0) = \sum_{i=1}^{n} \lambda_i z(x_i)$$

$\hat{z}(x_0)$: estimated value at location x_0
$z(x_i)$: known value at location x_i
λ_i: Kriging weight for $z(x_i)$, based on spatial correlation
$\sum \lambda_i = 1$: weights sum to 1 (unbiasedness condition)
Weights depend on variogram model (e.g., exponential, spherical...)





Model	Transform	RMSE	MAE	R^2
linear	none	0.00649	0.00450	0.210
linear	log	0.00670	0.00462	0.158
linear	sqrt	0.00652	0.00452	0.205
gaussian	none	0.00637	0.00475	0.239
gaussian	log	0.00697	0.00480	0.090
gaussian	sqrt	0.00692	0.00477	0.103
exponential	none	0.00647	0.00462	0.215
exponential	log	0.00658	0.00478	0.189
exponential	sqrt	0.00656	0.00477	0.193
spherical	none	0.00641	0.00474	0.230
spherical	log	0.00650	0.00458	0.209
spherical	sqrt	0.00650	0.00454	0.209