

Synthetic 2D Suspended Sediment Concentration (SSC) Modeling

This project creates a synthetic suspended sediment concentration (SSC) field using a Gaussian plume model and reconstructs the field from sparse sensor measurements.

The workflow includes plume generation, sensor simulation with noise/missing data, RBF-based spatial interpolation, and reconstruction evaluation (RMSE, MAE).

This script is designed to demonstrate numerical modeling and spatial reconstruction techniques, not a full hydrodynamic model.

File: `Coding_Sample_Dohyun_Kim.py`