RNN parameter selection Report - 西条

Prefecture code	38
Station code	38206050
Station name	西条
Target item	Ox(ppm)
Number of data points in the train set	18016
Number of data points in the validation set	4504
Number of features used	25
Model	RNN
Lag	24
Epochs	200
Batch size	128
Learning rate	0.0005
Hidden size	80
Number of layers	1
Dropout	0
Patience	8
Best validation loss	0.006857
Residuals mean	-0.002157
Residuals median	-0.003069
Residuals mode	-0.00306
Residuals std	0.007652
Residuals skew	0.335
Residuals kurtosis	0.81
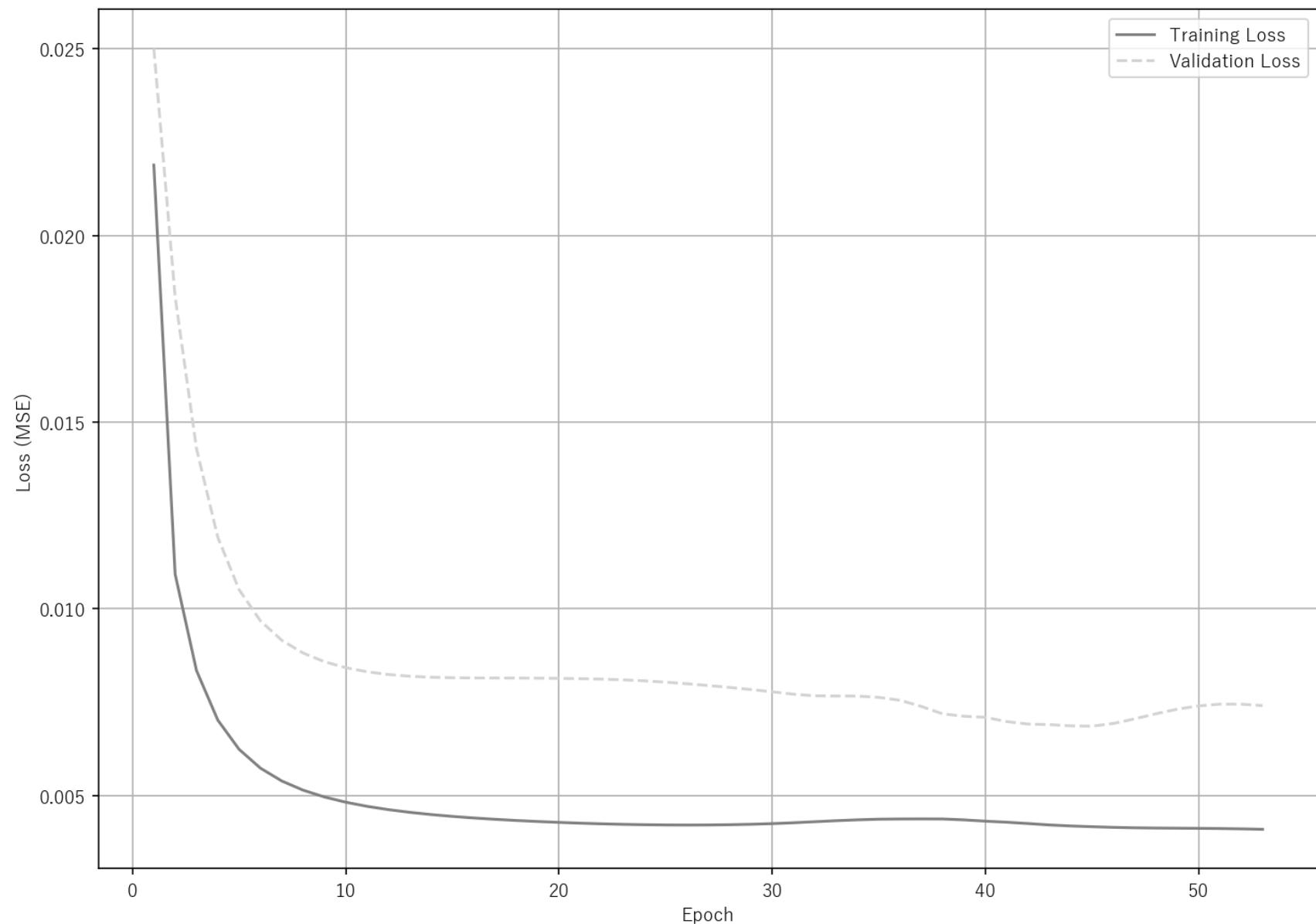
Features used for prediction

NO(ppm)	NO2(ppm)	U	V	Ox(ppm)_roll_mean_3
Ox(ppm)_roll_std_6	NO(ppm)_roll_mean_3	NO(ppm)_roll_std_6	NO2(ppm)_roll_mean_3	NO2(ppm)_roll_std_6
U_roll_mean_3	U_roll_std_6	V_roll_mean_3	V_roll_std_6	Ox(ppm)_diff_1
Ox(ppm)_diff_2	Ox(ppm)_diff_3	NO(ppm)_diff_3	NO2(ppm)_diff_3	U_diff_3
V_diff_3	hour_sin	hour_cos	dayofweek	is_weekend

Model accuracy

Target	R²	MAE	RMSE
Ox(ppm)	0.8453	0.0064	0.0079

Learning Curve (RNN)
Best Validation Loss: 0.00686

RNN Regression with lag
R²: 0.84526

Residual Error Distribution

Histogram of Residuals