Traffic Prediction – Selected Results

1 Final KNN evaluation

This task corresponds to Appendix L. After validating the algorithm, the best value of K was selected (generally $K = 1$). The final evaluation includes RMSE, MAPE, and R^2 metrics for each prediction horizon, as well as a comparison of predicted and observed values.

Table 1: Final performance metrics for KNN prediction (sensor E4S 58 140).

Horizon	RMSE	MAPE (%)	R^2
17:00–17:15	1.3508	3.1748	0.9977
17:15–17:30	0.9789	2.5324	0.9987
17:30–17:45	1.7651	1.7277	0.9947

Table 2: Final performance metrics for KNN prediction of flow (sensor E4S 58 140).

Horizon	RMSE	MAPE (%)	R^2
17:00–17:15	130.28	4.3934	0.9756
17:15–17:30	177.17	6.3735	0.9682
17:30–17:45	205.02	5.1636	0.9578

knn_evaluation_vs_true.png

Figure 1: Comparison of predicted vs observed speed and flow for two selected days.