v offset **RMSF** 9.073 8.159 .403 1.613 1.95 5.475 4.46 1.671  $\times 10^{-1} \times 10^{-3} \times 10^{-2}$  1.0  $\times 10^{-1}$  $\times 10^{-1} \times 10^{-2}$  10  $\times 10^{-1} \times 10^{-4} \times 10^{-2} 10$  $\times 10^{-1}$  $\times 10^{-8} \times 10^{-4} 10$ 1.031 9.519 7.745 5.724 2.808 1.613 1.793 9.91 5.475 9.62 8.077 5.941  $\times 10^{-1} \times 10^{-2}$  1 0 ×10-2  $\times 10^{-2} \times 10^{-3}$  1.0 ×10<sup>-2</sup>  $\times 10^{-2} \times 10^{-2} 10$  $\times 10^{-2}$  $\times 10^{-5} \times 10^{-2}$  1.0  $\times 10^{-4}$ 1.906 9.519 1.671 1.302 2.808 1.403 3.53 9.9 1.95 7.676 8.077 4.46  $\times 10^{-3}$  1.0  $\times 10^{-1}$  1.0  $\times 10^{-6}$  1.0  $\times 10^{-8}$  1.0 ×10<sup>-8</sup>  $\times 10^{-2} \times 10^{-3}$  $\times 10^{-3} \times 10^{-1}$  $\times 10^{-2} \times 10^{-4}$  $\times 10^{-2}$ 1.906 1.031 4.971 1.302 5.724 9.073 1./93 1.936 7.676 9.62 8.159 3.53  $\times 10^{-8} \times 10^{-5} \times 10^{-1}$  $\times 10^{-3} \times 10^{-1} \times 10^{-1}$  $\times 10^{-1} \times 10^{-2} \times 10^{-1}$  $\times 10^{-6} \times 10^{-2} \times 10^{-1}$ 1.0 1.0 1.0 1.0 Forecasting time 2 s Forecasting time 3 s Forecasting time 4 s Forecasting time 5 s 11.4164.256 1.416 11.416  $\times 10^{-4} \times 10^{-9} \times 10^{-9}$  1.0  $\times 10^{-5} \times 10^{-9} \times 10^{-9} 10$  $\times 10^{-6} \times 10^{-9} \times 10^{-9}$  1.0 - UniTS 7.6/6 7.415 1.4163.01/ 8.766 1.416 3.568 7.71 1.416  $\times 10^{-8} \times 10^{-1}$  1.0  $\times 10^{-7} \times 10^{-1} 10$  $\times 10^{-9}$ ×10<sup>-9</sup>  $\times 10^{-4} \times 10^{-1}$  10 ×10-9 LSTM Third 8.766 1.806 3.705 7.415 2.574 1.1771.416 7.71 1.416  $\times 10^{-7}$  1.0  $\times 10^{-7}$  1.0  $\times 10^{-4}$  1.0  $\times 10^{-9}$ ×10<sup>-1</sup> ×10<sup>-9</sup>  $\times 10^{-1}$ ×10<sup>-9</sup>  $\times 10^{-1}$ **GRU Reference** 3.705 7.676 4.135 1.177 3.017 2.549 1.806 3.568 4.256 ×10<sup>-4</sup> ×10<sup>-4</sup> ×10<sup>-6</sup> 1.0  $\times 10^{-7}$  $\times 10^{-8} \times 10^{-4}$ 1.0  $\times 10^{-7} \times 10^{-7} \times 10^{-5}$ 1.0 GRU Att 2

Forecasting time 30 s

Forecasting time 20 s

Forecasting time 10 s