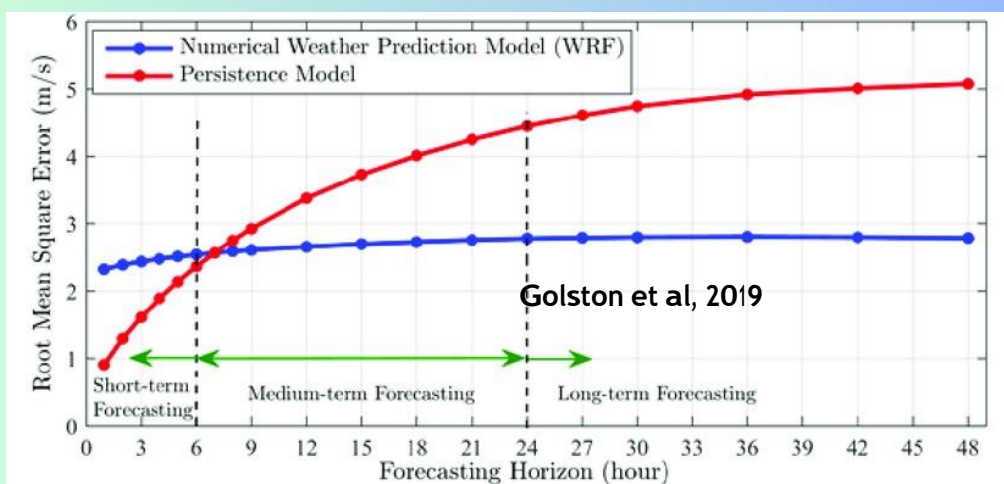


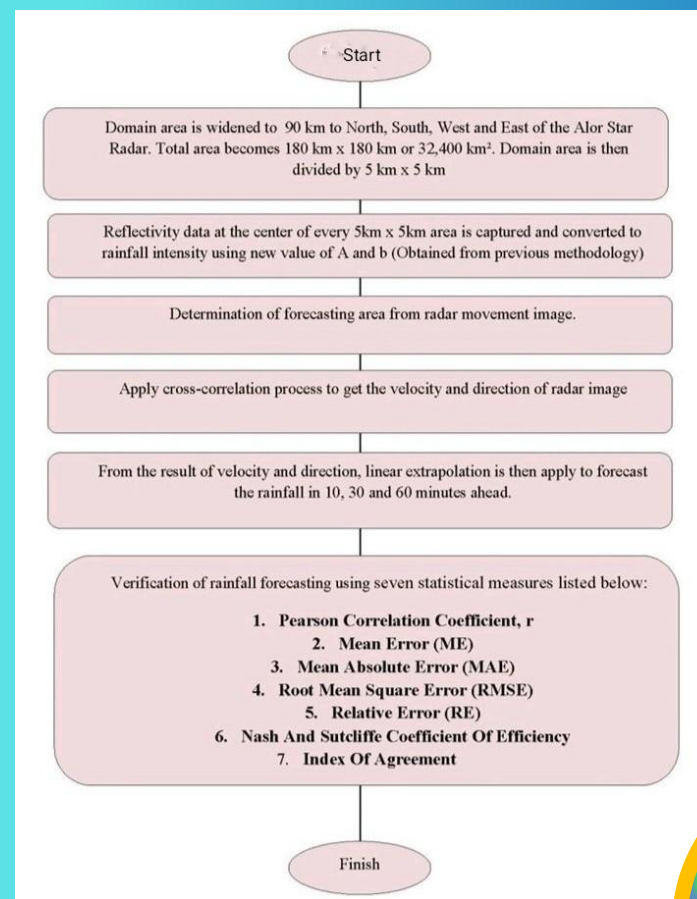
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PRODUCT DESCRIPTION

- Rainfall nowcasting means forecasting precipitation with a lead time of 0-2 hours. (Kong et. al, 2023)
- A persistence model assumes that the future value of a time series is calculated under the assumption that nothing changes between the current time and the forecast time.

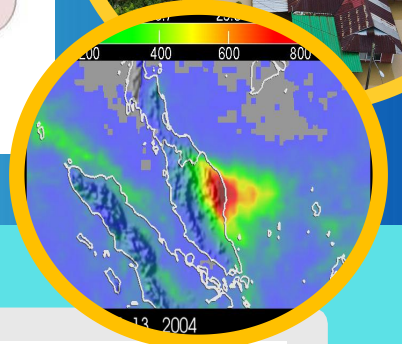


METHODOLOGY

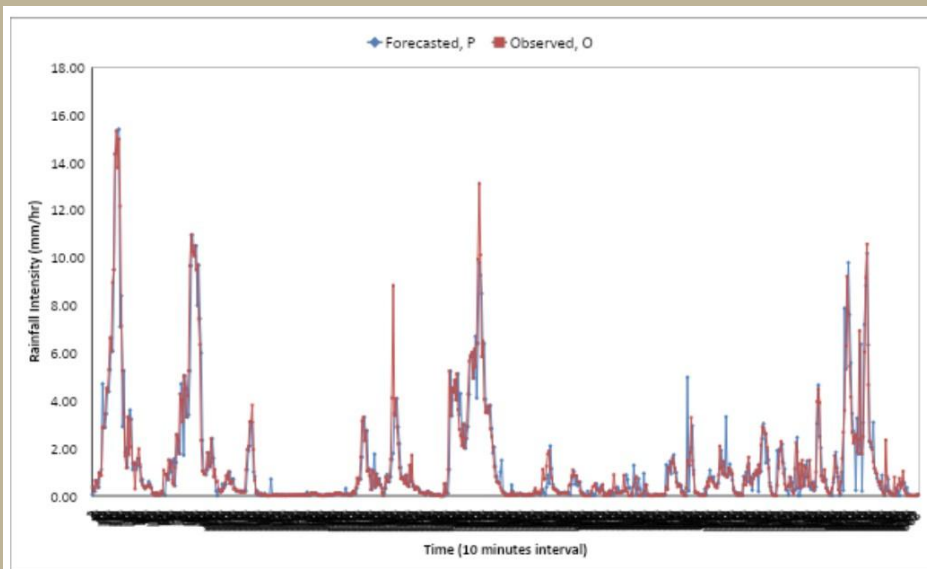


Rainfall tracking method

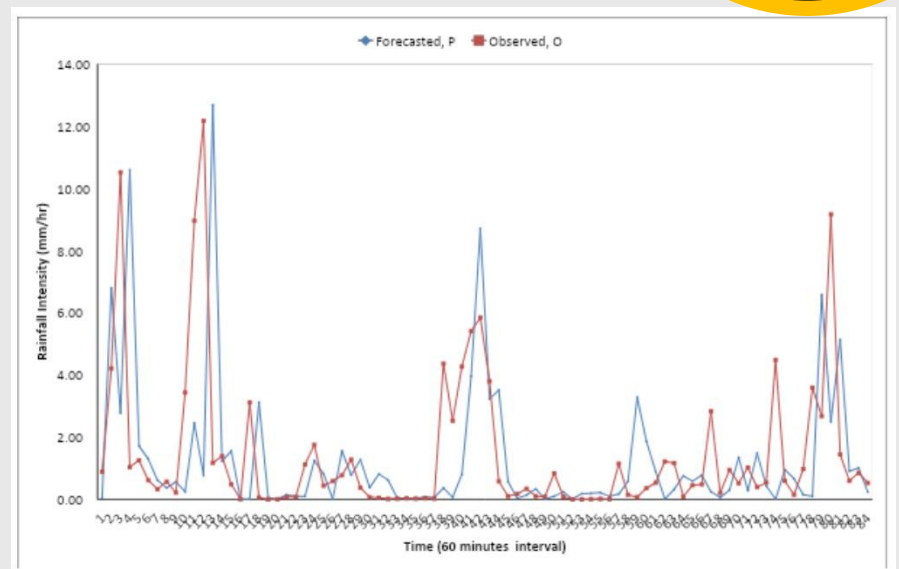
- cross correlation
- linear extrapolation
- persistence forecast



PERFORMANCE



10 minutes lead time



60 minutes lead time

Statistical measures	Lead time forecasting	
	10 minutes ahead	60 minutes ahead
Root Mean Square Error (RMSE)	0.86	2.86
Nash and Sutcliffe Coefficient of Efficiency	0.86	-0.43
Index of Agreement	0.96	0.47

CONCLUSION

The best lead time using persistence forecast is 10 minutes lead time. The shorter the lead time, the better nowcasting can be made. It is maybe due to the short time of lead time forecasting not significant different for rainfall to growth and decay