

Deciphering the ACF

Here is a short guide on how to read the ACF plot when examining a new data set:

Shape	Recommended Model/Action
Exponential, decaying to 0	AR model. Plot the PACF to identify the correct order.
Alternating positive and negative values, decaying to 0 in absolute terms	AR model. Plot the PACF to identify the correct order.
Most are essentially 0, apart from one or more spikes	MA model. The correct order is determined by where the plot becomes zero.
Decay, starting after a few lags	ARMA model.
All zero or close to zero	Data is essentially random (RW).
High values at fixed intervals	Use a seasonal AR model.
No decay to zero	The series is non stationary. Use an integrated model.