

AR and MA models

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- This model is preferred when we have only trend in the series

MA Models

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 - For q lags, MA(q) can be written as

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- Preferably used when there are random spikes/jumps in the data

AR-MA Time Series Model

ARMA (p,q):

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The ARMA model of order (p,q) is:

We can combine these two models by simply adding them together as a model of order (p,q), where we have p AR terms and q MA terms:

$$y_t = \alpha_1 y_{t-1} + \dots + \alpha_p y_{t-p} + E_t + \beta_1 E_{t-1} + \dots + \beta_q E_{t-q}$$

Thank You