**ARIMA**

ARIMA stands for Auto-Regressive Integrated Moving Average. It is based on the idea that the information in the past values of the time series can alone be used to predict the future values.

ARIMA explains a given time series based on its own past values i.e. its own lags and the lagged forecast errors, so that equation can be used to forecast future values.

Any ‘Non-seasonal’ time series that exhibits patterns and is not a random white noise can be modeled with ARIMA models.

* **AR**: *Autoregression*. A model that uses the dependent relationship between an observation and some number of lagged observations.
* **I**: *Integrated*. The use of differencing of raw observations (e.g. subtracting an observation from an observation at the previous time step) in order to make the time series stationary.
* **MA**: *Moving Average*. Uses dependency between an observation and a residual error from a moving average model applied to lagged observations.