Difference between ACF and PACF:

ACF (AutoCorrelation Function):

- *What it does:* ACF measures the correlation between a time series and its lagged values (previous time points).
- *Why it's useful:* It helps identify the presence of autocorrelation, which is the similarity between observations as a function of the time lag between them. In simpler terms, it tells you how much a current observation is related to past observations.

PACF (Partial AutoCorrelation Function):

- *What it does:* PACF, on the other hand, measures the correlation between a time series and its lagged values, but it removes the effect of intermediate lags.
- *Why it's useful:* It helps identify the direct relationship between two points in time, excluding the influence of other data points in between. Essentially, it gives you a clearer picture of the direct relationship between observations.