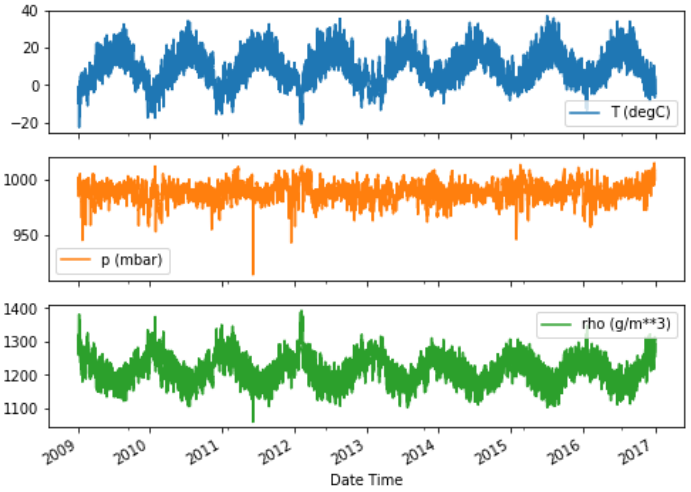

Time Series and Signals

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Objective

- difference between time series and signals

1. Time Series

- It is more related to data analysis domain
- any data points are varied and measured over times, bank interests change, GDP growth, COD changes in river, popution growth, etc.
- it usually depicts the data values (y) is a function of time (t): $y = f(t)$
- A time series is always indexed by time

2. A Signal

- It is more related to physics, image analysis, engineering / science domains
- Many signals are basically a time series once they are sampled at a certain time interval, such as speech, audio, power, water and environmental quality data from sensors or labs, etc.
- A signal is more general, not necessary measured by time, maybe spatial coordinates, distances to a source, or multi-dimensional
- Almost any thing carring information can be interpreted as a signal.