Time Series with Features

Univariate and Multivariate Time Series

Univariate Time Series	Multivariate Time Series
● Observations taken at equal intervals of time	● Observations taken at equal intervals of time
● Single Target Variable	● Multiple Target Variable

What if you have additional features?

Time Series with Features

Date	Holiday?	Weekend?	Discount	Offer	Unit_sold
01/12	1	yes	10%	1	21
02/12	1	yes	12%	1	14
03/12	1	no	50%	0	60
04/12	0	no	1%	0	32
05/12	1	no	0%	1	48
06/12	0	no	0%	0	17

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✓ Time dependent

✓ Ordered Data

✓ Observed at equal interval

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Summarizing Types of Time Series

- **Univariate Time Series:**
  - Datetime variable
  - Single time-dependent variable

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  - Single time-dependent variable
  - Multiple independent variables

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Thank You

Time Series Regression

- So far the problems we discussed are Regression Problems

  - Stock Prices

  - Product Sales

  - Number of Bookings

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