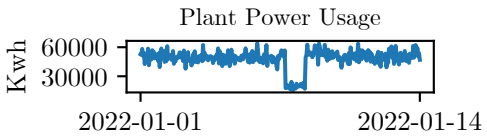
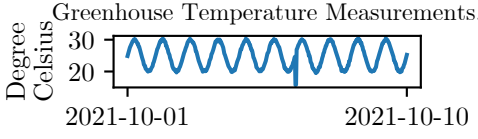
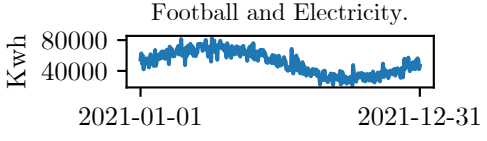


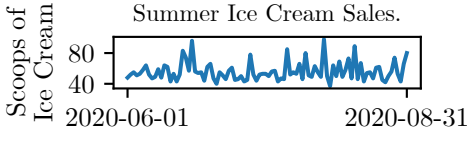
A manufacturing plant records the power usage of its machinery every hour for two weeks. A sudden maintenance shutdown occurs in the second week, causing a decline in power usage.



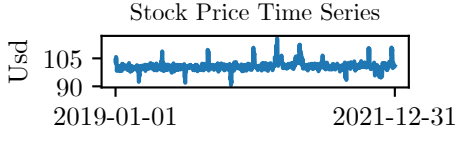
A scenario for a time series could be the temperature measurements in a greenhouse. The data might be influenced by external events such as a power outage, causing the temperature inside the greenhouse to drop. A temperature sensor inside the greenhouse gathers data every 30 minutes for 10 days.



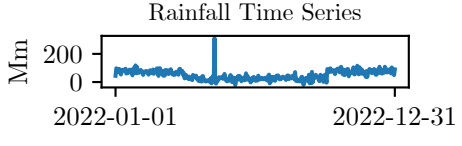
A regional electrical company measures the daily electricity consumption in kilowatt-hours for a medium-size city over the course of 365 days. The local football team has an excellent season, making it to the playoffs, which leads to an increase in electricity usage due to local celebrations and more usage of electronic devices to follow the games.



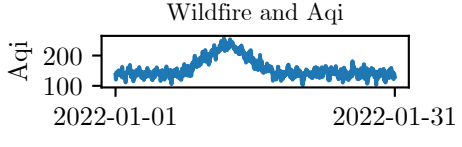
A local ice cream shop tracks sale of its best-selling flavour, vanilla, over the course of summer. The shop is open 7 days a week from June 1 to August 31. Number of scoops sold each day depend on the daily temperature, with sales significantly increasing over 30°C days.



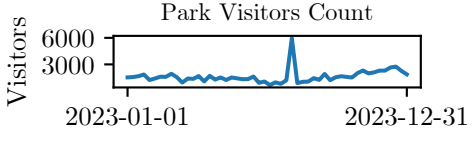
The time series records the daily closing prices of a particular stock in the market over a period of three years. The prices are influenced by external events including company earnings reports, global or regional economic indicators, and geopolitical events. The sample rate is daily, and the series spans a three-year period (approximately 1095 observations).



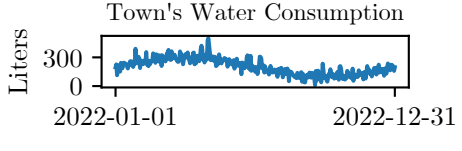
This hypothetical scenario involves measuring the amount of rainfall in a forest area over a year. External event includes a major thunderstorm striking the area, causing a significant increase in rainfall readings. Rainfall is measured daily, creating a time series of 365 observations.



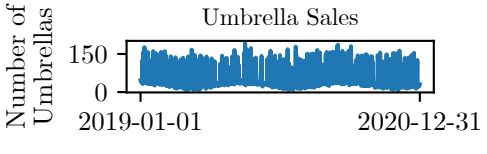
The air quality index (AQI) of a city, sampled every hour for a month. A significant external event could be a substantial wildfire miles away, which may gradually increase AQI over several days before eventually dissipating.



The scenario describes a year in a city park where visitor count is recorded every week. The external event is the city's annual music festival, which significantly increases the park's visitors that week. The time series lasts for 52 weeks.



Measurements of a town's drinking water consumption over a 12-month period. The sample rate is once per day, yielding a time series of 365 observations. External events such as heatwaves could significantly increase water consumption.



This scenario analyzes the sale of umbrellas in a local store sampled daily over two years. The time series indicates the correlation of sale numbers with external events like rainfall. When rain forecasts are high the store experiences higher umbrella sales.