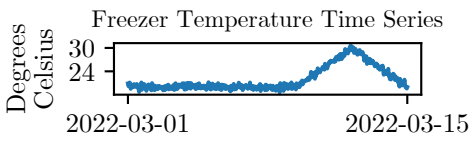
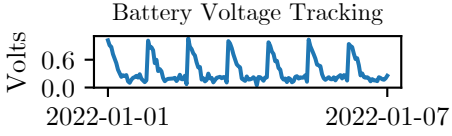
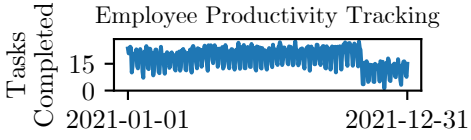


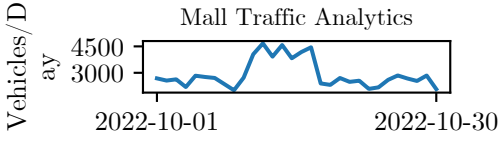
A scientist is measuring the temperature in an industrial freezer over two weeks, with a new reading taken every 6 hours. An unexpected power outage occurs in the middle of this period lasting 3 days. This causes the freezer temperature to rise before it is restored and begins dropping again.



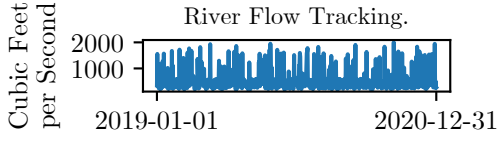
A system is being monitored where the variable being tracked is the battery discharge voltage of an autonomous vehicle over one week's night-time operations (when the solar power is not occurring). The sample rate is once every hour. The time series would be expected to show downward trend during operation and spikes when the vehicle stops and starts.



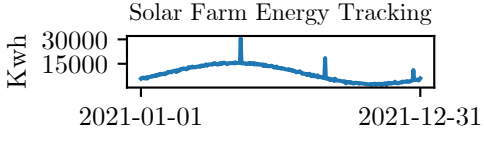
This scenario considers an employee's average daily productivity in terms of tasks completed, across a year. The annual holiday season (November-December) might lead to decreased productivity given the common disruptions and distractions. This time series uses a daily sample rate captured over the span of a year.



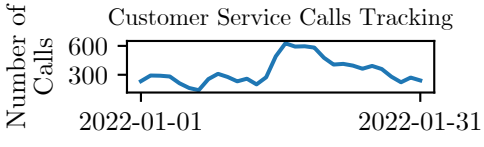
We monitor the daily traffic count on a road near a shopping mall. The mall abroad starts a huge promotional sale event for a week that attracts more shoppers, causing higher traffic counts. The time series is collected for 30 days with a daily sample rate.



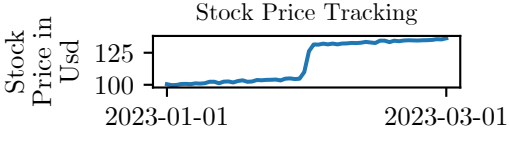
This scenario covers the time series data of streamflow rate in a large river, which may be affected by the external event of heavy rainfall in the catchment area. The streamflow rate is sampled daily for a span of 2 years, yielding around 730 observations.



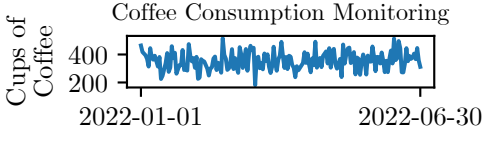
The scenario is a year-long tracking of daily solar energy harvested by a solar farm located in a temperate climate zone. An external event such as a solar flare could influence the reading by increasing solar intensity, thereby driving energy harvest numbers up significantly. The time series samples data at a rate of once per day for a full 365-day period.



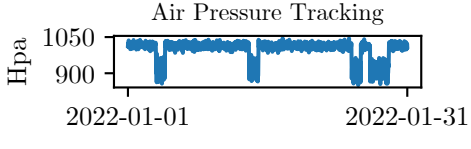
A finance company wants to track the number of outgoing customer service calls made every day for a month (30 days). The company launched a new product on the 15th day. This event could significantly increase the number of calls. The sample rate is daily, and each value represents the number of outgoing calls.



The scenario involves tracking stock prices for a certain tech company over the course of 60 days. The sample rate for the time series is one value per day, taken at the end of each trading day. A key external event could be the launch of a highly anticipated product, which is expected to generate high sales and positively impact the stock price.



Monitor the daily coffee consumption rate at a tech startup office over six months (approximately 182 days). Each day's consumption is impacted by external events such as weather (more consumption on colder days) and deadline rush (more consumption during project delivery days).



A meteorologist is monitoring air pressure on a remote island to help predict severe weather events. They collect a pressure reading every 30 mins for 1 month. Despite the general steady pressure, they expect a significant drop whenever there is storm activity in the area.