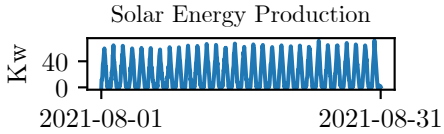
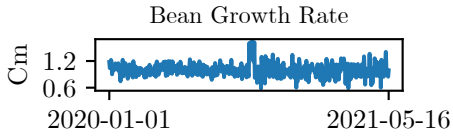
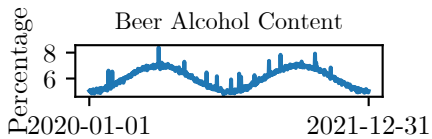


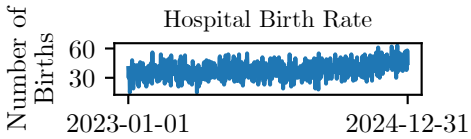
A scenario of an energy company monitoring solar energy production. The data is captured by a sensor every hour for 30 days. The external event is a series of cloudy days affecting the energy output.



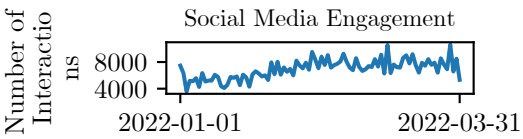
A greenhouse facility measures the growth of a unique variety of bean plant under controlled environment conditions. The growth of the plants, measured in cm, is noted once every day for a total duration of 500 days. An external event occurs around day 250 with a sudden increase in CO2 concentration due to a faulty control system, which ceases after day 260. This influences the bean plant growth rate.



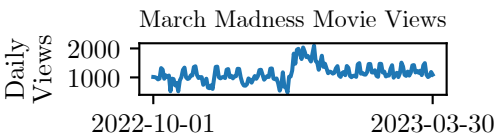
A small-scale brewery measures the alcohol content in their main beer product daily at 8 PM, over the course of 2 years. External events such as seasonal temperature fluctuations and the occasional use of a different yeast strain might influence the measurements.



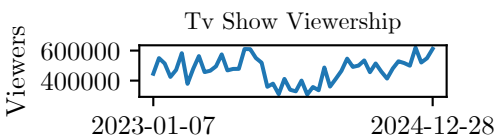
In a city hospital, a study is conducted to measure daily birth rate for a duration of 2 years. Unexpectedly, a severe heatwave hits the city in the second year which might result in a higher birth rate due to increased indoor activities. The time series is sampled every day for 2 years making it 730 observations.



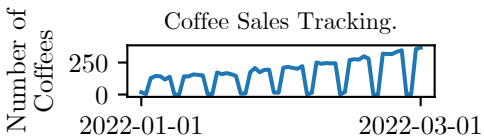
This scenario describes the fluctuations observed in a company's daily social media engagement (likes, comments, shares) over a three-month period. Influential external events, such as launch of a new product, might spike the engagement rate. The engagement rate is sampled at a daily rate.



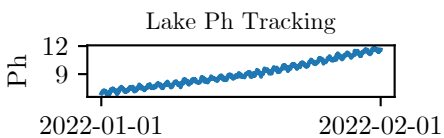
A university research department is conducting a study to understand the impact of the NCAA March Madness basketball tournament on the streaming numbers of basketball related movies. The time series tracks the daily views of basketball related movies on the university's online streaming platform over a 6 month period (approximately 180 days) leading up to and immediately after the tournament. The tournament itself lasts for 3 weeks and could cause a surge in streaming numbers.



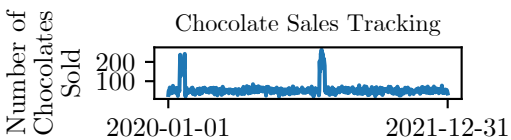
The scenario is about monitoring the number of viewers of a popular, weekly TV show over the course of 2 seasons (50 episodes). Due to the show's controversial content, there is an external event where a large group decides to boycott the show from episode 21 to 30, possibly causing a dip in the viewership.



A café has initiated a new breakfast offer to attract more customers. The time series aims to monitor the daily number of coffees sold over a two month period, following the launch of the promo. The sample rate is daily, with each observation reflecting the total coffees sold in a day. The effects of the new offer might influence changes in the daily coffee sales data.



This scenario involves tracking hourly water quality measure (specifically water pH) in a municipal lake for a month. An unexpected event, such as a chemical spill from a nearby factory, might affect the pH readings. There would be 744 observations in this time series.



A boutique local chocolate shop has been tracking the daily number of artisan chocolates sold over the past two years. During the Valentine's Day period, a significant increase in sales is observed due to the increased demand for chocolates as gifts. The sample rate of this time series is one sample per day for a duration of two years, resulting in 730 observations.