

# CPSC 330 Lecture 19: Time series

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# Motivation

- **Time series** is a collection of data points indexed in time order.
- Time series is everywhere:
  - Physical sciences (e.g., weather forecasting)
  - Economics, finance (e.g., stocks, market trends)
  - Engineering (e.g., energy consumption)
  - Social sciences
  - Sports analytics

# Applying existing methods

What are some challenges we might have with time series data?

## Dataset

We'll be starting with the **CitiBike dataset** today



[How it Works](#)

[Pricing](#)

[Find a Bike](#)

[Explore NYC](#)

[Help](#)

# System Data

Where do Citi Bikers ride? When do they ride? How far do they go? Which stations are most popular? What days of the week are most rides taken on? We've heard all of these questions and more from you, and we're happy to provide the data to help you discover the answers to these questions and more. We invite developers, engineers, statisticians, artists, academics and other interested members of the public to use the data we provide for analysis, development, visualization and whatever else moves you.

This data is provided according to the [Citi Bike Data Use Policy](#).

# Group Work: Class Demo & Live Coding

For this demo, each student should [click this link](#) to create a new repo in their accounts, then clone that repo locally to follow along with the demo from today.