

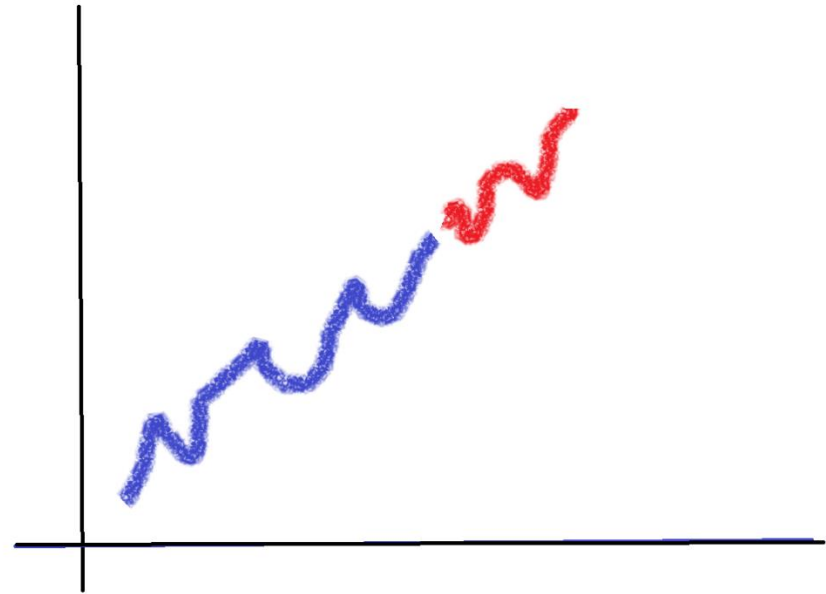
Forecasting

Overview

Forecasting

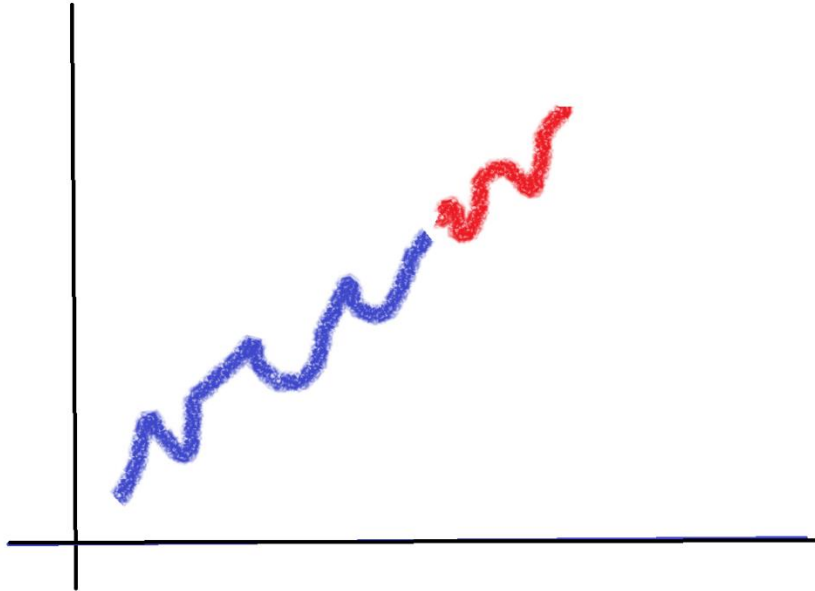
Forecasting: predicting future values of the time series through known past values plus any other related data **available at the time of forecast.**

Predict future values



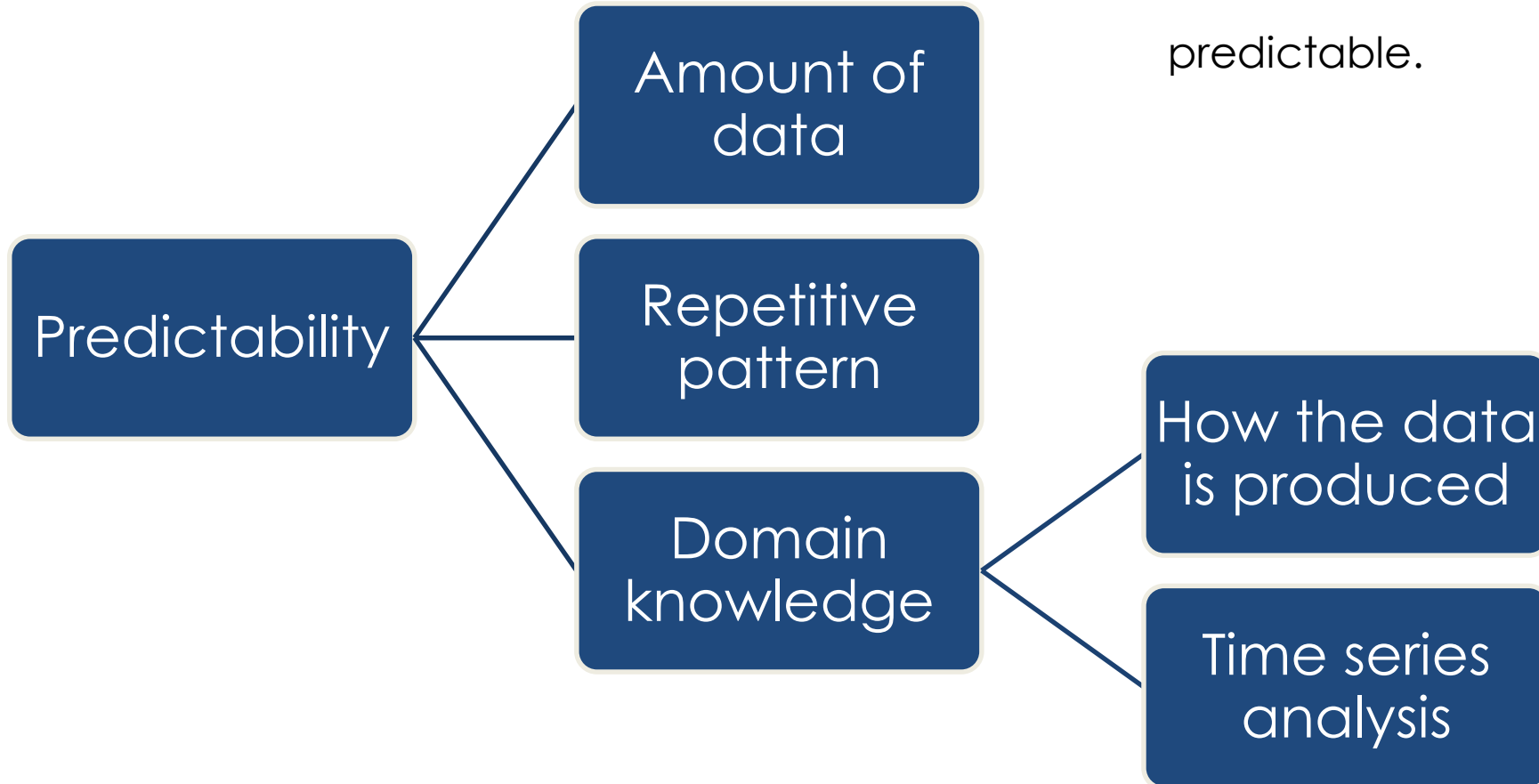
Forecasting - examples

Predict future values



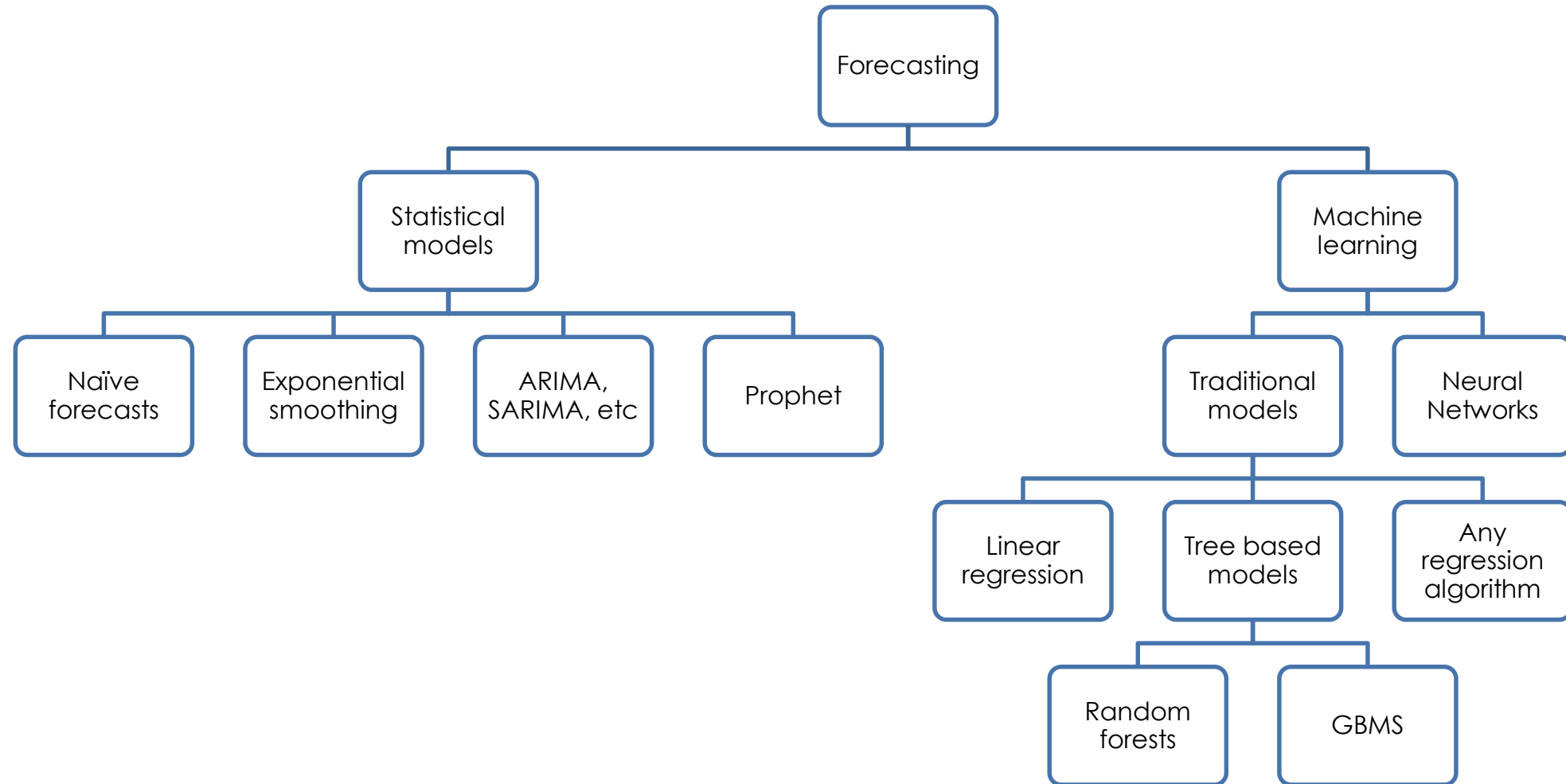
- Sales forecasting
- Product demand forecasting
- Income through donations
- Energy demand and production
- Stock price forecasting
- Air pollution

Predictability

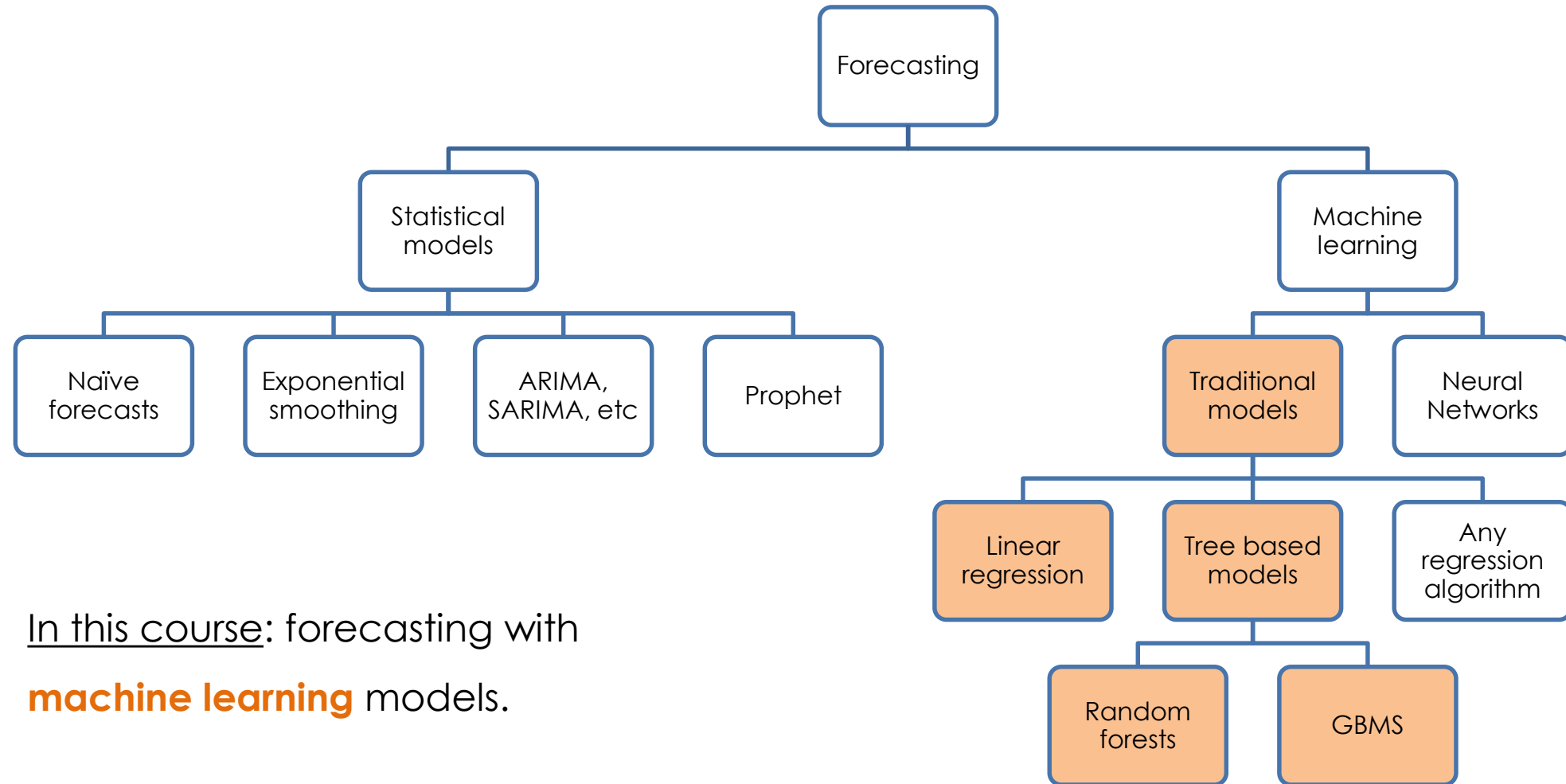


Not all time series are equally predictable.

Forecasting models



Forecasting models

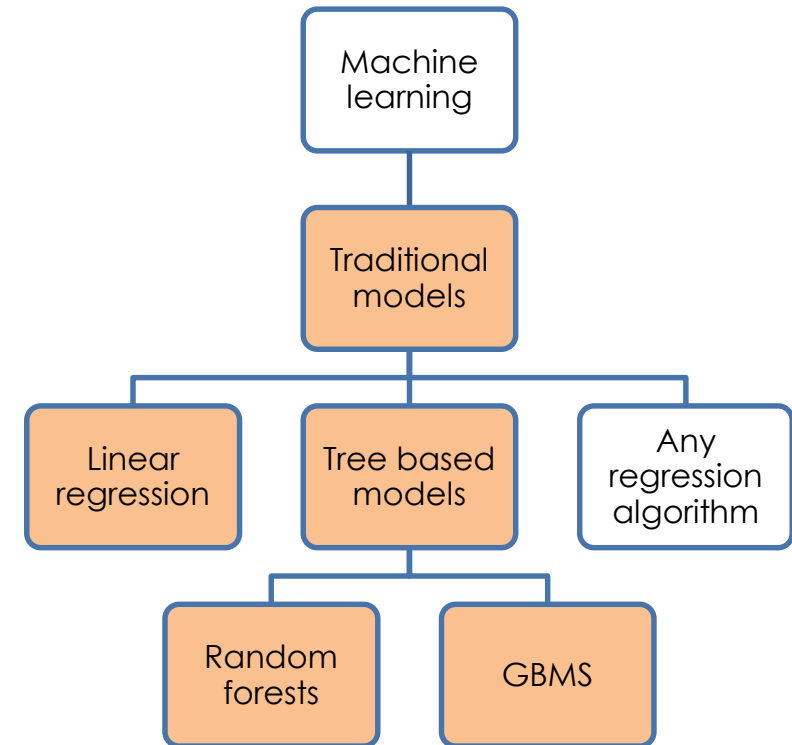


In this course: forecasting with
machine learning models.

Forecasting with machine learning

Advantages:

- Interpretability
- Model non-linear or complex relationships
- Combine predictors derived from the time series with exogenous data sources
- Model multiple time series simultaneously



Summary

Forecasting is predicting future values of a time series based on past data.

Not all time series are equally predictable.

There are several forecasting models: classical or statistical models and machine learning models.