

Module 1 Time Series Review

Know what is meant by a series having a trend and/or season and be able to identify if a series has a trend and/or season

Decomposition

- STL versus Classical

- Formula for decomposition (multiplicative and additive)

- What does multiplicative seasonality look like compared to additive seasonality

- Seasonally adjusted data (for both additive and multiplicative series)

Know all the different Exponential Smoothing models and be able to identify which one is being used (either by R output or by an equation given)

Know the different accuracy measures and how to calculate them (potential disadvantages too)...formulas for these will be provided

Difference between an accuracy statistic and a goodness-of-fit statistic

Know how to make trending data stationary

Know what a Random Walk is and how to deal with it

Know how to read and interpret ADF tests (and hypotheses)

Know what a Stationary time series is

Correlation functions (what each one is and what it tells you)

- Know what Autocorrelation is

- Know what Partial Autocorrelation is

White noise (and how to test for no autocorrelation...know the hypotheses)

What an AR, MA and ARMA (or ARIMA) model is

- Can write out any one of these models