

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 how to deal with Random Walks

Know how to read and interpret ADF test (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 (do not worry about differences).