

### Week 8 Reading Questions

**Q1:** Describe the key difference between the non-parametric model (Ch. 7.1) and the parametric model (Ch. 8.1)

The key difference between the parametric and the non-parametric model, in the non-parametric you only use the deterministic component since the error does not have a formal specification. In the Parametric Model, you use both the deterministic component and the error. Even though, sometimes we may only use the error.

**Q2:** What is the difference between interpolation and extrapolation?

The difference between interpolation and extrapolation is that interpolation is prediction within the measured range of data and extrapolation is prediction beyond the measured range of the data.

**Q3:** Explain why extrapolation has more pitfalls than interpolation.

Extrapolation has more pitfalls because it is more problematic in the sense that if you choose the wrong model it can lead to extreme predictions beyond the major range of the data which is why it needs to be used with caution. Extrapolation is less reliable than interpolation.