Matt Fertakos – worked alone

1) Describe key differences between the non parametric and the parametric model.
    a. A non parametric model does not include a stochastic component, which is included in the parametric model. In a non parametric model only the deterministic component of the models needs to be specified. A priori information is needed in a parametric model to understand randomness in the sample. In the brown creeper experiment the deterministic component is the linear relationship between brown creeper abundance and late-successional forest extent, and the stochastic component is the normally distributed errors. So, in the non parametric model it would only include the linear relationship, while in the parametric model it would contain the linear model and an error component. Inferences made from non parametric models are weaker than those created by parametric models.
2) Interpolation and extrapolation may both be used to make predictions. What is the difference between interpolation and extrapolation?
    a. Interpolation is used to make predictions within the range of the dataset, while extrapolation is used to make predications outside the range of the dataset.
3) Explain why extrapolation has more pitfalls than interpolation.
    a. Because extrapolation can be based on many different model types, there are a vast array of predictions that can be found when extrapolating. Choice of the correct model is crucial to create an accurate prediction. This is not true in interpolation, in which you have data spanning both sides of your prediction allowing it to be more accurate as a result, making it a less risky choice.