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1. The main difference between these two models is that parametric models stick to strict parameters with a defined error. Nonparametric models do not define error because they have some parameters that can change. This gives the nonparametric model its strength to compare across different model sizes, however there is the loss of an error value in the equations.
2. Extrapolation is a way of generating data points from a known data set with a fitted function. Based on the already generated function, one can then predict other data points that are related to the originals. Interpolation is another way of generating data, however instead of predicting other data points, it simplifies existing data for a more representative model.
3. Extrapolation has more pitfalls because it predicts future data points. Trends may change outside of a certain range of data, which would then mean your predictions are less accurate. For example, analytical chemistry uses calibration curves for analysis of elements, however these are only applicable for certain ranges. Once you go past the upper limit of concentration, the detector becomes saturated, giving a disproportionate signal compared to lower concentrations. Extrapolating data outside of chemistry calibration curves always shows some of the major pitfalls with predictions.  
   Interpolations is a simplification of the data for a model with less error. This has less problems because it only works when the error loss is worth simplifying. There are not upper or lower bounds to keep within because you work with the existing data.