

Q1 Answer:

Key difference between the non-parametric and the parametric model:

The non-parametric model does not determine the data distribution (no specific data estimation). In terms of stochastic and deterministic component, it specifies the deterministic one but not the stochastic. In the non-parametric model, the parameters can be adjustable, distribution is not specified, contains error.

The parametric model, is the model with fixed parameters (independent, known facts), which summarizes the data with those fixed parameters. As a result, provides better predictions but has less flexibility with bound complexity.

Q2 Answer:

The data prediction within a measured range is termed as the interpolation whereas, data prediction crossing the range of its measured range termed as the extrapolation. It suggested to be more careful when deal with the extrapolation, because model choice plays a role here.

In the interpolation, unknown values are estimated from the known values but in the extrapolation, future prediction are made based on the previous records but might not be accurate.

Q3 Answer:

Extrapolation has confidence lacking in terms of data predictions as they are predicted from outside of the measured data range. Incorrect prediction may happen and the error depend on the what type of model is selecting when deals with the extrapolation.