**Title of the paper**: Newton’s forward interpolation: representation of numerical data by a polynomial curve

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**Objectives:**

In literature, a number of interpolation formulas such as Newton’s Forward Interpolation formula, Newton’s Backward Interpolation formula, Lagrange’s Interpolation formula, Newton’s Divided Difference Interpolation formula, Newton’s Central Difference Interpolation formula, Stirling's formula, Bessel's formula, are available. These formulas take a lot of numerical computation. In this paper, the authors derived a new formula of the polynomial curve from Newton’s forward interpolation which can be used for interpolation.

**What is interpolation:**

Interpolation is the technique of estimating the value of a function for any intermediate value of the independent variable.

**What is Newton’s forward and backward interpolation:**

This interpolation is based on the calculus of finite differences. It consist of two important interpolation formulae by means of forward and backward differences of a function.

**When to use these formula:**

The first two terms of this formula give the linear interpolation while the first three terms give a parabolic interpolation and so on. **Newton’s forward interpolation** formula is particularly used for interpolating the values of a function f(x) is near the beginning of the set of values given. Also this formula is applicable if in case where **h**(difference in interval) is constant. **Newton’s backward interpolation** formula is useful when the value of a function f(x) is required near the end of the table.Both formulas are used when the intervals for computing a value of a function are equidistant. For example: if we have five data points, say x = 2 , 4 , 6 , 8 and 10. If we want to find a value of f(x) at x = 3 which is near the beginning of the set of values, then Newton’s forward interpolation will work best. If we want to find a value of f(x) at x = 9 then backward interpolation will do the best.

**Limitation of the paper:** The authors claim that the derived polynomial curve for interpolation is not suitable for the following situation:

1. The given values of the independent variable are at equal interval.
2. The value of the independent variable corresponding to which the value of the dependent variable is to be estimated lies in the first half of the series of the given values of the independent variable.

As an application of their proposed formula, they did not take into consideration of different data values. They also did not show the validity of the proposed formula by apply this formula for different set of data values.