**NON-PARAMETRIC**

**Bachelor of Technology**

**Computer Science and Engineering**

Submitted By

NAME – ABHIRUP BAG

ROLL NUMBER – 13000122082

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**Techno Main**

**EM-4/1, Sector-V, Salt Lake**

**Kolkata- 700091**

**West Bengal**

**India**

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1. **Introduction**

Non-parametric methods are statistical procedures that do not make assumptions about the underlying distribution of the population under study. These methods are commonly referred to as "distribution-free" because they make no assumptions regarding the distribution's form.   
  
The primary notion behind the parametric method is that no parameters are assumed for the provided population or the population under study. In truth, the procedures are not dependent on the population. There is no predetermined set of parameters provided here, nor is any type of distribution (normal distribution, etc.) available for use. This is why nonparametric approaches are often known as distribution-free methods.

1. **Characteristics of Non-Parametric Methods**
   1. **No Fixed Parameter Assumptions –** Unlike parametric models that have a predefined structure, non-parametric models adapt to the data without a fixed number of parameters.
   2. **Flexibility –** These methods can model complex relationships that parametric models might miss.
   3. **Data-Driven Approach –** They rely on the structure and distribution of the observed data rather than a theoretical model.
   4. **Computational Complexity –** Many non-parametric methods require more computational power, especially for large datasets.
2. **Dflnldf**
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