Module-04, Python for Machine Learning
Classification Algorithms (K-Nearest Neighbors (KNN))

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- **Definition:** KNN is a simple, instance-based algorithm that classifies data points based on the majority class among their k-nearest neighbors.
- **History:** Proposed by Evelyn Fix and Joseph L. Hodges in 1951. Widely used for classification and regression tasks.
  Working Principle:
    - Find the k-nearest neighbors of a data point.
    - Assign the class that is most frequent among the neighbors.
- **Examples:**
    - Handwriting recognition.
    - Customer segmentation.

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K-nearest neighbors: Mathematical Formulation

- **Mathematical Notation:** Not as explicitly defined with mathematical formulas as some other algorithms. Generally, the decision is based on voting from nearest neighbors.

Great Job
Thank yo