K-Nearest Neighbours (KNN) and Hierarchical Temporal Memory (HTM) are two different types of classifiers used in machine learning, each with its own unique approach and characteristics. Let's break them down:

**K-Nearest Neighbours (KNN)**

1. **Algorithm Type**: KNN is a **supervised** learning algorithm.
2. **Approach**: It is a **lazy learner**, meaning it doesn't learn a discriminative function from the training data but memorizes the training dataset instead.
3. **How It Works**:
   * **Distance-Based**: KNN classifies a data point based on how its neighbours are classified. The most common distance metric used is Euclidean distance.
   * **Voting Mechanism**: It looks at the 'k' closest data points to the one being classified and assigns the most common class among those neighbours.
4. **Use Cases**: It's often used for tasks like classification and regression, especially when the data distribution is not known.
5. **Pros and Cons**:
   * **Pros**: Simple to implement, intuitive, no training phase.
   * **Cons**: Slow with large datasets, sensitive to the choice of 'k' and the distance metric.

**Hierarchical Temporal Memory (HTM)**

1. **Algorithm Type**: HTM is based on **unsupervised** learning principles, although it can be adapted for supervised tasks.
2. **Approach**: HTM is inspired by the structure and functioning of the neocortex in the human brain.
3. **How It Works**:
   * **Pattern Recognition**: HTM learns sequences of patterns over time and can predict future patterns based on learned sequences.
   * **Temporal Memory**: It has the ability to remember the temporal ordering of patterns and make predictions based on this memory.
   * **Sparse Distributed Representations (SDRs)**: HTM uses SDRs to represent information, which makes it robust and efficient.
4. **Use Cases**: Primarily used for anomaly detection, sequence prediction, and applications that require temporal understanding.
5. **Pros and Cons**:
   * **Pros**: Capable of learning temporal sequences, biologically inspired, robust to noise.
   * **Cons**: Complex, relatively new and less widely adopted compared to traditional methods like KNN.