**Linear Search**

* **Description**: Linear search, also known as sequential search, scans through an array or list from the beginning to find a target item.
* **Algorithm**:
  + Start at the first position.
  + Compare the current item to the target.
  + If they match, return the position.
  + Otherwise, move to the next position.
  + Repeat until the end of the array.
  + If not found, return -1.
* **Time Complexity**: O(n) (linear time complexity).
* **When to Use**:
  + Use linear search for small datasets or unsorted arrays.
  + It’s straightforward to implement and works well when the data is not sorted.

**Binary Search**

* **Description**: Binary search operates on a sorted array by dividing the search space in half at each step.
* **Algorithm**:
  + Compare the middle element to the target.
  + If equal, return its position.
  + If less, search the left half.
  + If greater, search the right half.
  + Repeat until found or the search space is empty.
* **Time Complexity**: O(log n) (logarithmic time complexity).
* **When to Use**:
  + Use binary search for large datasets or sorted arrays.
  + Efficiently narrows down the search space.