1-> **Image Preprocessing**:

* First, the input image is converted to grayscale to simplify it by removing colors.
* Then, the image is slightly blurred to reduce noise and make edges (such as cone boundaries) more visible.

2-> **Edge Detection**:

* We use a technique called **Canny Edge Detection** to detect the edges in the image. This helps in identifying areas where there is a sharp change in color or intensity, like the boundaries of the cones.

3-> **Contour Detection**:

* From the detected edges, **contours** are found. Contours are curves that connect all the continuous points along the boundary of an object, such as the cones.
* We filter out very small contours to ignore irrelevant parts of the image.

4-> **Line Detection with Hough Transform**:

* We use **Hough Line Transform**, a technique to detect straight lines from the contours and edges. This helps in identifying possible boundary lines along the cones.
* The detected lines are then separated into left and right lines based on their slope (whether they tilt left or right).

5-> **Line Averaging**:

* The left and right lines are averaged to create smooth, continuous red boundary lines. This step ensures that the red lines follow the general direction of the cones and form clear boundaries.

6-> **Final Drawing**:

* The red lines representing the left and right boundaries are drawn on the original image to show the detected path.