Horizontal Bars

```
int width = ip.getWidth(); // Get the width of the image
int height = ip.getHeight(); // Get the height of the image
int height_bar = 50; // Set the height of each bar to 50 pixels (adjust as needed)
int i = 0; // Initialize a variable to keep track of horizontal bar rows
int j = 0; // Initialize a variable to count the pixels in each bar row
int v = 0; // Initialize intensity value (0 for black, 255 for white)

for (int y = 0; y < height; y++) { // Loop through the rows (height) of the image
    for (int x = 0; x < width; x++) { // Loop through the columns (width) of the image
        ip.putPixel(x, y, v); // Set the pixel at (x, y) to the specified intensity (v)
    }
    if (j == height_bar) { // Check if the height threshold (height_bar) for a bar row is reached
        i++; // Increment the row counter
        j = 0; // Reset the pixel count for the new row
        if (i % 2 == 0) // If the row number is even, set intensity to 0 (black)
            v = 0;
        else // If the row number is odd, set intensity to 255 (white)
            v = 255;
    }
    j += 1; // Increment the pixel count within the current bar row
}
```

Horizontal Bars of Growing Width

```
        int height = ip.getHeight(); // Get the image's height
        int width = ip.getWidth(); // Get the image's width

        int intensityImprovement = 5; // Set the intensity improvement factor

        int yStart, yEnd, intensity; // Rename variables for clarity
        int j = 0;
        int rowCount = 1; // Change columnCount to rowCount

        int i = 0;
        while (i < height) { // Loop through the image's height instead of width

            rowCount++;

            yStart = i; // Start from the current y position
            yEnd = i + rowCount - 1; // Set the end y position based on rowCount

            intensity = j * intensityImprovement;

            for (int y = yStart; y < yEnd; y++) { // Loop through the vertical bars (height)
                for (int x = 0; x < width; x++) { // Loop through the width of the image
                    ip.putPixel(x, y, intensity); // Place pixels horizontally
                }
            }

            j++;
            i = yEnd; // Update the starting y position for the next row
        }
```