numDisparities is the number of disparity levels. NumDisparities = maxDisparity - minDisparity (Already set in the program from 0-60)

SAD/SSD/NCC compute the match Cost.

It measures the similarity of the pixels (aggregated over window). The 1-D array stores the match cost of each pixel at each disparity.

matchCost – 1D array
size = [m_NumDisparities*height*width]

FindBestDisparity

Computes the disparity with minimum match cost for each pixel and saves it in disparities array.

disparities – 1D array
size = [height*width]
Segmentation

**Segmentation**

- **Image 1** ($I_1$)
- **Image 2** ($I_2$)

**Segment - K-means to segment the image in color and position space**

1. **GridSegmentation**
   - Computes initial segmentation

2. **ComputeSegmentMeans**
   - Compute the mean color and position for each segment

3. **AssignPixelsToSegments**
   - Assign each pixel to the closest segment using position and color

4. **SegmentAverageMatchCost**
   - Average the match cost for each pixel in a segment.

5. **FindBestDisparity**
   - SSD

**Updated segment - 1D array**
- size = [width*height]
- Stores the segment assignment for each pixel

**meanSpatial[2] and meanColor[3]**
- size = number of segments
- Store the segment’s mean position and color

**Updated matchCost - 1D array**
- size = [width*height]