# Intel\_tf\_int8\_F1\_Vs\_weight\_dataset2

**F1 value Vs Weight**

Data-set:1

Image size: 64

Weight: 64,128,192,256,320(For tF1-\_int8 Format)

Threshold:0.5,0.55,0.6,0.65,0.7,0.75,0.8,0.85,0.9,0.95

F1-- value: in range F1-rom 0.5 to 1

For Threshold 0.5 and 0.55:

1. At 0.5 threshold, F1-- value is lowest for weight 64
2. At 0.55 threshold, F1-- value for weight 64,128 and 192 is closer
3. F1-- value is highest at weight 320 for both the threshold

For Threshold 0.6 and 0.65:

1. At 0.6 threshold, F1-- value for weight 64 is surpassing the F1-- value for weight 128
2. At 0.65 threshold, F1-- value for weight 64 is surpassing the F1-- value For weight 128 and 192
3. F1-- value is lowest For weight 128 For both threshold
4. F1-- value is highest For weight 320 For both threshold
5. Graph is shifting upward along y-axis above 0.9 F1-- value

For Threshold 0.7 and 0.75:

1. F1-- value is lowest For weight 128 For both threshold
2. F1-- value is highest For weight 320 For both threshold
3. At 0.75 threshold, highest value is approaching 1 value which is indicating the upward shiF1-t oF1- graph along y-axis

F0r threshold 0.8 and 0.85:

1. F1-- value is lowest For weight 128 For both threshold
2. At 0.8 threshold, F1-- value is highest For weights 256 and 320 , closer to one and similar
3. At 0.85 threshold, F1-- value For weight 320 is reached one and F1-- value at weight 256 is tending to approach 1

For Threshold 0.9 and 0.95:

1. At 0.9 threshold, F1-- value is lowest For weight 128, rest oF1- the weights are reached F1-- value 1
2. At 0.95, all the weights reached F1-- value 1 and weight 128 is tending to approach 1
3. Graph is shiF1-ted completely upward along y-axis at 0.95 threshold

**Overall Conclusion:**

1. At threshold 0.5, F1-value is lowest for weight 64
2. At threshold 0.55, F1-value is lowest for weights 64,128 and 192
3. Thresholds from 0.6 to 0.9, F1- value is lowest for weight 128
4. The bad results will be generated for weight 128 for thresholds 0.6 to 0.9 and for threshold 0.5 at weight 64 bad results will be generated and at threshold 0.55, bad results will be generated at weights 64,128 and 192
5. F1-value is highest at weight 320 for thresholds from 0.5 to 0.85 and good results will be generated at weight 320 for image size 64 at thresholds 0.5 to 0.85
6. At 0.9 threshold, F1-value for all weights except 128 reached 1
7. At 0.95 threshold, graph is horizontal straight line i.e. precision value 1

**F1 value Vs Weight**

Data-set:1

Image size: 128

Weight: 64,128,192,256,320(For tF1-\_int8 Format)

Threshold:0.5,0.55,0.6,0.65,0.7,0.75,0.8,0.85,0.9,0.95

F1-- value: in range F1-rom 0.5 to 1

For threshold 0.5 and 0.55:

1. F1-- value is lowest For weight 128 For both thresholds
2. F1-- values For weight 192 and 256 are highest and similar

For threshold 0.6 and 0.65:

1. F1-- value is lowest For weight 128 For both threshold
2. F1-- value is highest For weights 192 and 256 For both thresholds
3. At 0.6 threshold, F1-- value is closer to 0.8 but at 0.65 threshold, F1--value is between 0.8 to 0.9
4. So graph is shifting upward along y-axis

For threshold 0.7 and 0.75:

1. F1--value is lowest For weight 128 For both threshold
2. F1-- value is highest For weights 192 and 256 For both threshold
3. F1--value For weight 64 is closer to 0.9 For threshold 0.7 and For 0.75 threshold, F1--value is slightly greater than 0.9

For threshold 0.8 and 0.85:

1. F1--value is lowest For weight 128 For both threshold
2. For 0.8 threshold, F1-- value is highest For weights 192 and 256
3. For 0.85 threshold, F1--value For weight 192 is surpassing the F1--value For weight 256
4. For 0.85 threshold, F1--value For weight 192 is highest and closer to 1

For threshold 0.9 and 0.95:

1. F1--value is lowest For weight 128 For both threshold
2. For 0.9 threshold, F1--value For weight 64 is second lowest value
3. At 0.95 threshold, F1--value For all weights except 128 reached 1

**Overall conclusion:**

1. F1-value is lowest for all thresholds at weight 128 so bad results will be generated at weight 128 for all thresholds for image size 128
2. Thresholds from 0.5 to 0.75, F1-value is highest for weights 192 and 256
3. For thresholds 0.8 and 0.85, F1-value is highest for weight 192
4. Good results will be generated for weights 192 and 256 for thresholds 0.5 to 0.75 and at weight 192 for thresholds 0.8 and 0.85
5. At 0.9 threshold, F1-value is highest for weights 192,256 and 320 at F1-value for weight 64 is second lowest
6. At 0.95 threshold, all weights except 128 reached 1

**F1 value Vs Weight**

Data-set:1

Image size: 192

Weight: 64,128,192,256,320(For tF1-\_int8 Format)

Threshold:0.5,0.55,0.6,0.65,0.7,0.75,0.8,0.85,0.9,0.95

F1-- value: in range F1-rom 0.5 to 1

For threshold 0.5 and 0.55

1. F1-- value is lowest For weight 128 at both thresholds
2. F1-- value is highest For weight 256 For both thresholds

For threshold 0.6 and 0.65

1. F1-- value is lowest For weight 128 For both threshold
2. F1-- value is highest For weight 256 For both threshold
3. For 0.65 threshold, F1-- value For weight 64 is in between 0.8 and 0.9

For threshold 0.7 and 0.75

1. F1-- value is lowest For weight 128 For both threshold
2. F1-- value is highest For weight 256 For both threshold
3. For 0.75 threshold, F1-- value is slightly greater than 0.9

For threshold 0.8 and 0.85

1. F1-- value is lowest For weight 128 For both threshold
2. For 0.8 threshold, F1-- value is highest For weight 256
3. For 0.85 threshold, F1-- value For weight 320 is highest and approaching 1
4. At 0.85 threshold, F1-- value For weight 64 and 192 is somewhat same

For threshold 0.9 and 0.95

1. F1-- value is lowest For weight 128 For both threshold
2. At 0.9 threshold, F1-- value is highest For weight 320 and it is reached to 1
3. At 0.95 threshold, F1-- value all weights except 128 is reached 1

**Overall Conclusion:**

1. F1-value is lowest for weight 128 for all thresholds so bad results will be generated for weight 128 at all thresholds for image size 192
2. From thresholds 0.5 to 0.8, F1-value is highest for weight 256 so good results will be generated at weight 256 for 0.5 to 0.8 threshold for image size 192
3. For threshold 0.85 and 0.9, F1-value is highest for weight 320 so good results will be generated at weight 320 for threshold 0.85 and 0.9 for image size 192
4. At threshold 0.95 threshold, F1-value for all weights except 128 reached 1

**F1 value Vs Weight**

Data-set:1

Image size: 256

Weight: 64,128,192,256,320(For tF1-\_int8 Format)

Threshold:0.5,0.55,0.6,0.65,0.7,0.75,0.8,0.85,0.9,0.95

F1-- value: in range F1-rom 0.5 to 1

For threshold 0.5 and 0.55:

1. F1-- value is lowest For weight 128 For both thresholds
2. F1-- value is highest For weights 256 and 320 For both thresholds
3. F1-- value For weight 64 is somewhat closer to 0.8

For threshold 0.6 and 0.65:

1. F1-- value is lowest For weight 128 For both thresholds
2. F1-- value is highest For weights 256 and 320 For both thresholds
3. At 0.95 threshold, F1-- value For weight 192 is tending to become same as F1-- value For weight 256 and 320

For threshold 0.7 and 0.75:

1. F1-- value is lowest For weight 128 For both thresholds
2. For 0.9 threshold, F1-- value is highest For weights 256 and 320 and F1-- value For weight 192 is tending to approach the F1-- value For weight 256 and 320
3. For 0.95 threshold, F1-- values For weights 192, 256 and 320 are almost similar
4. At 0.95 threshold, F1-- value For weight 64 is 0.9

For threshold 0.8 and 0.85

1. F1-- value is lowest For weight 128 For both threshold
2. For 0.8 threshold, F1-- value For weight 192 and 320 is highest and surpassing the F1-- value For weight 256
3. For 0.85 threshold, F1-- value For weight 192 is highest and it is surpassing the F1-- value For weight 256 and 320
4. At 0.85 threshold, F1-- value For weight 192 is tending to approach 1

For threshold 0.9 and 0.95:

1. F1-- value For weight 128 is lowest For both threshold
2. F1-- value For all weights except 128 reached 1 For both thresholds
3. There is sudden increase in F1-- value oF1- weight 64

**Overall Conclusion:**

1. F1- value is lowest for weight 128 for all thresholds so good results will be generated at weight 128 for all thresholds for image size 256
2. F1-value is highest for weight 320 for thresholds 0.5 to 0.75 and F1-value for weight 256 is in close competition. so good results will be generated at weights 320 and 256 for thresholds 0.5 to 0.75 for image size 256
3. At 0.8 threshold F1 value for weight is highest for weights 192 and 320 so good results will be generated at weights 192 and 320 for threshold 0.8 for image size 256
4. For threshold 0.85, F1-value is highest for weight 192 so good results will be generated at weight 192
5. At 0.9 and 0.95 thresholds, all weights except 128 reached 1

**F1 value Vs Weight**

Data-set:1

Image size: 320

Weight: 64,128,192,256,320(For tF1-\_int8 Format)

Threshold:0.5,0.55,0.6,0.65,0.7,0.75,0.8,0.85,0.9,0.95

F1-- value: in range F1-rom 0.5 to 1

For threshold 0.5 and 0.55:

1. F1-- value is lowest For weight 128 For both thresholds
2. F1-- value is highest For weight 256 For both thresholds

For threshold 0.6 and 0.65

1. F1-- value is lowest For weight 128 For both thresholds
2. F1-- value is highest For weight 256 and closer to 1 For both thresholds
3. At 0.65 threshold, F1-- values For weight 192 and 256 are same

For threshold 0.7 and 0.75

1. F1-- value is lowest For weight 128 For both thresholds
2. F1-- value is highest For weight 256 and approaching 1 For both thresholds
3. F1-- value For weight 64 at 0.7 threshold is somewhat closet to 0.8 but For 0.75 threshold, F1-- value is in closer to 0.9. This is indicating the upward shiF1-t oF1- graph along y-axis

For threshold 0.8 and 0.85

1. F1-- value is lowest For weight 128 For both threshold
2. F1-- value is highest For weight 256 and almost reached 1 For 0.8 threshold
3. F1-- value is highest For weight 256 and reached 1 For 0.85 threshold
4. At 0.85 threshold, F1-- value For weight 192 is surpassing the F1-- value For weight 256 and 320

For threshold 0.9 and 0.95

1. F1-- value is lowest For weight 128 For both threshold
2. At 0.9 threshold, F1-- value For weight 64 is second lowest value
3. At 0.9 threshold, F1-- value For weight 192, 256 and 320 reached 1
4. At 0.95 threshold, F1-- value For all weights except 128 reached 1
5. At 0.95 threshold, F1-- value For weight 64 also reached 1
6. Graph is shiF1-ted along y-axis in upward direction

**Overall Conclusion**:

1. F1-value is lowest for weight 128 for all thresholds so bad results will be generated for weight 128 for all thresholds for image size 320
2. From threshold 0.5 to 0.85, F1-value is highest for weight 256 so good results will be generated for weight 256 at thresholds 0.5 to 0.85 for image size 320
3. For thresholds 0.9 and 0.95, F1-value for all weights except 128 reached 1

#Intel\_tf\_int8 \_pv\_vs\_wt \_dataset\_2

**Precision vs Weight**

**Dataset: 2**

**Weight: 64, 128, 192, 256, 320 (for tf\_int8 file format)**

**Threshold: 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95**

**Image size: 64**

For threshold 0.5 and 0.55

1. Lowest Precision value is for the weight of 64.
2. Highest Precision value is for the weight of 320.
3. Precision value of all the weights lie above 0.8.
4. For the threshold of 0.55, Precision value of weights of 64, 128 and 192 are nearly equal.
5. Precision value of weight of 256 lies between the precision value of weights of 128 and 320.

For threshold 0.6 and 0.65

1. As threshold value is increasing, Precision values for all the weights are also increasing.
2. Lowest Precision value is for the weight of 128.
3. Highest Precision value is for the weight of 320.
4. The Precision value of weight of 64 surpasses the precision value of weight of 128.
5. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.7 and 0.75

1. Lowest Precision value is for the weight of 128.
2. Highest Precision value is for the weight of 320.
3. As Precision value for all the weights are increasing it means that the graph is shifting upwards.
4. The precision value of weight of 64 is nearly equal to the precision value of weight of 256.
5. The Precision value of weight of 64 surpasses the precision value of weight of 192.
6. As threshold value is increasing, Precision values for all the weights are also increasing but the precision value of weight of 64 is increasing at faster rate as compared to others.

For threshold 0.8 and 0.85

1. Lowest Precision value is for the weight of 128.
2. Highest Precision value is for the weight of 320.
3. For the threshold of 0.85, Precision value of weight of 320 is equal to 1.
4. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.9 and 0.95

1. All the Precision values for all the weights lie above 0.95.
2. As threshold value is increasing, graph is shifting upwards.
3. All the precision values are reaching to 1 except for precision value of weight of 128.
4. The precision value is lowest for weight of 128.

Overall:

* As threshold value is increasing, precision values for all the weights are also increasing but the precisions value of weight of 64 is increasing at faster rate as compared to others.
* Performance of weights of 128 is the weakest.
* Performance of weight of 320 is best.

**Image size: 128**

For threshold 0.5 and 0.55

1. Lowest Precision value is for the weight of 128.
2. Precision value of weights 192 and 256 are nearly equal.
3. Precision value is highest for both the weights of 192 and 256.
4. Precision value of weight of 64 lies between the precision value of weight of 128 and 192.
5. Precision value of weight of 320 lies between the precision value of weight of 64 and 192.

For threshold 0.6 and 0.65

1. As threshold value is increasing, Precision values for all the weights are also increasing.
2. Lowest Precision value is for the weight of 128.
3. Precision value of weights 192 and 256 are nearly equal.
4. Precision value is highest for both the weights of 192 and 256.
5. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.7 and 0.75

1. All the precision value are above 0.6.
2. Lowest Precision value is for the weight of 128.
3. Precision value is highest for both the weights of 192 and 256.
4. As Precision value for all the weights are increasing it means that the graph is shifting upwards.
5. Nature of graph remains the same as for threshold 0.6 and 0.65.

For threshold 0.8 and 0.85

1. All the precision value are above 0.65.
2. Lowest Precision value is for the weight of 128.
3. Highest Precision value is for the weight of 192.
4. The Precision value of weight of 192 surpasses the precision value of weight of 256.
5. Nature of graph remains the same as for threshold 0.7 and 0.75.

For threshold 0.9 and 0.95

1. All the Precision values for all the weights lie above 0.85.
2. As threshold value is increasing, graph is shifting upwards.
3. All the precision values are reaching to 1 except for precision value of weight of 128.
4. The precision value is lowest for weight of 128.

Overall:

* As threshold value is increasing, precision values for all the weights are also increasing but the precisions value of weight of 64 is increasing at faster rate as compared to others.
* Performance of weights of 128 is the weakest.
* Performance of weights of 192 and 256 are best till the threshold of 0.8, however, at higher threshold, weight of 192 is best performer.

**Image size: 192**

For threshold 0.5 and 0.55

1. Lowest Precision value is for the weight of 128 which is below 0.5.
2. Highest Precision value is for the weight of 256.
3. Precision value of weight of 64 lies between the precision value of weight of 128 and 192.
4. Precision value of weight of 192 lies between the precision value of weight of 64 and 256.

For threshold 0.6 and 0.65

1. As threshold value is increasing, Precision values for all the weights are also increasing.
2. Lowest Precision value is for the weight of 128 which is equal to 0.5.
3. Highest Precision value is for the weight of 256.
4. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.7 and 0.75

1. All the Precision values for all the weights lie above 0.5.
2. Lowest Precision value is for the weight of 128.
3. Highest Precision value is for the weight of 256.
4. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.8 and 0.85

1. Lowest precision value is for the weight of 128.
2. Highest precision value is for the weight of 320.
3. Precision value of the weight of 320 is surpassing the precision value of the weight of 256 for the threshold of 0.85.
4. As threshold value is increasing, precision values for all the weights are also increasing but the precision value of weight of 64 is increasing at faster rate as compared to others.

For threshold 0.9 and 0.95

1. All the Precision values for all the weights lie above 0.6.
2. As threshold value is increasing, graph is shifting upwards.
3. All the precision values are reaching to 1 except for precision value of weight of 128.
4. The precision value is lowest for weight of 128.

Overall:

* As threshold value is increasing, precision values for all the weights are also increasing but the precision value of weight of 64 is increasing at faster rate as compared to others.
* Performance of weights of 128 is the weakest.
* Performance of weight of 256 is best for threshold till 0.8, however, at higher threshold 320 is best performer.

**Image size: 256**

For threshold 0.5 and 0.55

1. Lowest Precision value is for the weight of 128 which is below 0.5.
2. Highest Precision value is for the weight of 320.
3. Precision value of weights of 256 and 320 are nearly equal.
4. Precision value of weight of 64 lies between the precision values of weights of 128 and 192.

For threshold 0.6 and 0.65

1. As threshold value is increasing, Precision values for all the weights are also increasing.
2. Lowest Precision value is for the weight of 128 which is below 0.5.
3. Highest Precision value is for the weight of 320.
4. Precision value of weights 256 and 320 are nearly equal.
5. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.7 and 0.75

1. As threshold value is increasing, Precision values for all the weights are also increasing.
2. Lowest Precision value is for the weight of 128 which is below 0.5 for the threshold of 0.7.
3. Highest Precision value is for the weight of 320.
4. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.8 and 0.85

1. All the Precision values for all the weights lie above 0.5.
2. Lowest Precision value is for the weight of 128 which is below 0.6.
3. Highest Precision value is for the weight of 192.
4. The precision value of weight of 192 surpasses the precision value of weight of 256.
5. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.9 and 0.95

1. All the Precision values for all the weights lie above 0.7.
2. As threshold value is increasing, graph is shifting upwards.
3. All the precision values are reaching to 1 except for precision value of weight of 128.
4. The precision value is lowest for weight of 128.

Overall:

* As threshold value is increasing, precision values for all the weights are also increasing but the precision value of weight of 64 is increasing at faster rate as compared to others.
* Performance of weights of 128 is the weakest.
* Performance of weight of 320 is best for threshold till 0.8, however, at higher threshold 192 is best performer.

**Image size: 320**

For threshold 0.5 and 0.55

1. Lowest Precision value is for the weight of 128 which is below 0.5.
2. Highest Precision value is for the weight of 256.
3. Precision value of weight of 64 lies between the precision values of weights of 128 and 192.
4. Precision value of weight of 320 lies between the precision values of weights of 192 and 256.

For threshold 0.6 and 0.65

1. As threshold value is increasing, Precision values for all the weights are also increasing.
2. Lowest Precision value is for the weight of 128 which is below 0.5 for the threshold of 0.6.
3. Highest Precision value is for the weight of 256.
4. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.7 and 0.75

1. As threshold value is increasing, Precision values for all the weights are also increasing.
2. All the Precision values for all the weights lie above 0.5.
3. Lowest Precision value is for the weight of 128.
4. Highest Precision value is for the weight of 256.
5. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.8 and 0.85

1. All the Precision values for all the weights lie above 0.6.
2. As threshold value is increasing, Precision values for all the weights are also increasing.
3. Lowest Precision value is for the weight of 128.
4. Highest Precision value is for the weight of 256 which is equal to 1.
5. The precision value of weight of 192 surpasses the precision value of weight of 320.
6. As Precision value for all the weights are increasing it means that the graph is shifting upwards.

For threshold 0.9 and 0.95

1. All the Precision values for all the weights lie above 0.8.
2. As threshold value is increasing, graph is shifting upwards.
3. All the precision values are reaching to 1 except for precision value of weight of 128.
4. The precision value is lowest for weight of 128.

Overall:

* As threshold value is increasing, precision values for all the weights are also increasing but the precision value of weight of 64 is increasing at faster rate as compared to others.
* Performance of weights of 128 is the weakest.
* Performance of weight of 256 is best.

**Overall Conclusion:**

* In general, irrespective of any image size and any threshold value, performance of weight of 128 is weakest.
* In general, performance of weights of 192, 256 and 320 are good.
* In general, for any values of thresholds and weights, precision values are increasing but the precision value of weight of 64 is increasing at faster rate as compared to others.

**F1value vs Weight (for tf-int8)**

**Data Set: 2**

**Weights: 64, 128, 192, 256 ,320**

**Threshold: 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95**

**Image Size =64**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 192 and weight 64 for threshold 0.5.

2)F1value is lowest at weight 192 for threshold 0.55.

3)F1value is highest for weight 320.

4) F1values at weight 64 and 128 are comparable to each other at threshold 0.55.

5)F1values at weight 256 and 320 are comparable to each other at threshold 0.55.

6)F1value is higher than 0.85 for all weights at both thresholds.

7)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 192 for threshold 0.6

2)F1value is lowest at weight 128 for threshold 0.65.

3)F1value is highest for weight 320.

4) F1values at weight 64 and 128 are comparable to each other at threshold 0.6.

5)F1values at weight 256 and 320 are comparable to each other at threshold 0.65.

6)F1values at weight 128 and 192 are comparable to each other at threshold 0.65.

7)F1value is higher than 0.9 for all weights at 0.65 threshold.

8)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest t weight 320.

3) F1values at weight 64 and 256 are comparable to each other at both thresholds.

4)F1value is higher than 0.9 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is highest at weight 320 for threshold 0.8.

2) F1value is highest at weight 256 and weight 320 for threshold 0.85.

3) F1value is lowest for weight 128 for both thresholds.

4) F1values at weight 256 and 320 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is highest at weight 256 and weight 320 for threshold 0.9.

2) F1value is highest at weights 64,192,256 and 320 which is equal to 1, for threshold 0.95.

3) F1value is lowest for weight 128 for both thresholds.

4) F1values at weight 64 and 192 are comparable to each other at threshold 0.9.

5)F1values at weight 256 and 320 are comparable to each other at threshold 0.9.

6) The f1 value for all the weights increased, this means that the graph is shifting upwards.

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

Till threshold 0.6, minimum value of F1value occurs at weight 192 but at 0.65 it surpasses and F1value becomes minimum at weight 128.

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 320.

**Image Size =128**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weight 192 and weight 256 are comparable to each other at both thresholds.

4) The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weight 192 and weight 256 are comparable to each other at both thresholds.

4)F1value is higher than 0.7 for all weights at 0.65 threshold.

5) The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is highest at weight 256 for threshold 0.7.

2) F1value is highest at weights 192 and 256 for threshold 0.75.

3) F1value is lowest for weight 128 for both thresholds.

4) F1value is higher than 0.7 for all weights at both thresholds.

5) The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 192.

3) F1value is higher than 0.75 for all weights at both thresholds.

4) F1values at weights 192 and 256 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is highest at weight 320, equal to 1 for threshold 0.9.

2) F1value is highest at weights 64,192, 256 and 320 equal to 1, for threshold 0.95.

3) F1value is lowest for weight 128 for both thresholds.

4) F1value is higher than 0.8 for all weights at 0.9 threshold.

5)F1value is higher than 0.9 for all weights at 0.95 threshold.

6)The f1 value for all the weights increased, this means that the graph is shifting upwards.

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

Till threshold 0.55, maximum F1value occurs only at weight 256 but at 0.5 F1 value of weight 192 catches up and to 256 ,and both weight 192 and 256 continue to have maximum F1 value till threshold 0.8 ,but at 0.85 F1 value of weight 256 is surpassed by F1 value of weight 192.

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256.

**Image Size =192**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at 0.55 threshold.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256 and 320 for threshold 0.8.

3) F1value is highest for weight 320 for threshold 0.85.

4) F1values at weights 256 and 320 are comparable to each other at both thresholds.

5) F1value is higher than 0.65 for all weights at both thresholds.

6)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is lowest at weight 128.

2) F1value is highest for weight 192,256 and 320 and equal to 1 for both thresholds.

3) F1value is higher than 0.85 for all weights at both thresholds.

4)The f1 value for all the weights increased, this means that the graph is shifting upwards.

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

Till threshold 0.8,maximumvalue of F1value occurs at weight 256 but at 0.85 it gets surpassed and F1value becomes maximum at weight 320

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256.

**Image Size =256**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256 and 320 for threshold 0.55.

3) F1value is highest for weight 256 for threshold 0.5.

4) F1values at weights 256 and 320 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 320.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest for weight 320.

3) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 192.

3) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.7 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is lowest at weight 128.

2)F1 value is highest for weight 192 which is equal to 1 for threshold 0.9.

3) F1value is highest for weight 192,256 and 320 and equal to 1 for threshold 0.95.

4) F1value is higher than 0.8 for all weights at both thresholds.

5) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

6)The f1 value for all the weights increased, this means that the graph is shifting up

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight.

Till threshold 0.6, maximum F1value occurs at weight 256 but at 0.65 it gets surpassed and F1value becomes maximum at weight 320, F1 value at weight 320 remains maximum till 0.7 threshold but at 0.75 it gets surpassed and Fl value becomes maximum at weight 192

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256

**Image Size =320**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.6 for all weights at both thresholds.

4)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.6 for all weights at both thresholds.

4) F1values at weight 192 and weight 320 are comparable to each other at 0.65 threshold.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.7 for all weights at 0.75 threshold.

4) F1values at weight 192 and weight 320 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.7 for all weights at 0.8 threshold.

4)F1value is higher than 0.75 for all weights at 0.85 threshold.

5) F1values at weight 192 and weight 320 are comparable to each other at 0.8 threshold.

6)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is lowest at weight 128.

2)F1 value is highest for weight 256 which is equal to 1 for threshold 0.9.

3) F1value is highest for weight 192,256 and 320 and equal to 1 for threshold 0.95.

4) F1value is higher than 0.9 for all weights at 0.95 threshold.

5) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

6)The f1 value for all the weights increased, this means that the graph is shifting up

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256.

**Overall Conclusion:**

In general, overall performance of weight of 128 is weakest.

In general, overall performance of weight of 256 is best.

For image size 64 the overall best performance is at weight of 320.

For image size 128 the overall best performance is at weight of 192 and weight 256.

**Precision vs Weight**

**Data Set: 2 (Jetson\_tf\_int8)**

**Weights: 64, 128, 192,256, 320**

**Threshold: 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95**

**Image Size =64**

For threshold: 0.5 to 0.55

1. At threshold 0.5, precision value at weight 64 and 192 are comparable to each other and lowest
2. At threshold 0.55, the precision value becomes lowest for weight 192 and precision value for weight 64 is surpassing the precision value for weight 192
3. The highest precision value occurs at weight 320.
4. Nature of graph remains same just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. At threshold 0.6, precision value at weight 64, 128 and 192 are comparable to each other and lowest
2. At threshold 0.65, the precision value becomes lowest for weight 128.
3. At 0.65 threshold, precision value for weight 64 has surpassed the precision value for weight 128 and precision value for weight 192 has surpassed the precision value for weight 128
4. The highest precision value occurs at weight 320.
5. Graph shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The precision value becomes lowest for weight 128 for both thresholds.
2. The highest precision value occurs at weight 320 for both thresholds.
3. Graph shifts upwards slightly.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value at weight 320 for threshold 0.8.
3. At threshold 0.85, the precision value at weight 256 and 320 are comparable to each other and highest.
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1. The Precision value is minimum at weight 128 for both thresholds.
2. Precision values at weight 192 and 256 is 1 for threshold 0.9.
3. At 0.9 threshold, Precision value for weight 64 is approaching 1
4. Nature of the graph remains the same; just it shifts upwards slightly
5. For threshold 0.95, the precision value becomes 1 for all weights except for weight 128.

Conclusion

1. As the threshold value increases, the nature of graph is becoming as a straight line.
2. For threshold 0.5, precision value is lowest for weights 64 and 192 so bad results will be generated at these weights
3. For threshold 0.55, precision value is lowest for weight 192 so bad results will be generated for weight 192
4. For threshold 0.6, bad performance will be observed at weight 64,128 and 192
5. From threshold 0.65 to 0.95, Precision value is lowest for weight 128 so bad results will be generated at this weight
6. Form threshold 0.5 to 0.8, precision value is highest for weight 320 for threshold 0.85, precision value is highest for weight 256 and 320 so good results will be generated at these weights.
7. At 0.95 thresholds all weights except weight 128 has precision value 1

**Image Size =128**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value at weight 192 and 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128 for both thresholds.
2. Precision value is highest for weight 192 and 256 for both thresholds.
3. Nature of graph remains same; just it shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128 for both thresholds.
2. precision value at weight 192 and 256 is highest for both thresholds
3. Nature of graph remains same; just it shifts upwards slightly.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128 for both thresholds.
2. At threshold 0.8, precision value at weight 192 and 256 is highest
3. At threshold 0.85, the precision value becomes highest at weight 192.
4. Nature of graph remains same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1. The Precision value is minimum at weight 128 for both thresholds.
2. Precision values at weight 192 and 256 are comparable to each other.
3. For threshold 0.9, precision value is highest for weight 320 and it is 1.
4. Nature of the graph remains the same; just it shifts upwards slightly.
5. At threshold 0.95, the precision value becomes 1 all weights except for weight 128.

conclusion

1. As the threshold value increases, the precision value tends to 1.
2. Precision value is lowest for weight 128 for all thresholds so worst results will be generated at weight 128
3. From thresholds 0.5 to 0.8, precision value is lowest for weight 192 and 256 so good results will be generated at weight 192 and 256
4. For threshold 0.85 and 0.9. precision value is highest for weight 192 and 320 respectively so bad results will be generated for respective weights
5. At 0.95 thresholds all weights except weight 128 have precision value 1

**Image Size =192**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 256 for both thresholds.
3. Precision value for weight 256 and 320 are comparable
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. The precision value at weight 64 is less than that at 192.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. The precision value at weight 256 and 320 are comparable to each other.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The precision value at weight 256 and 320 are comparable to each other at both threshold values.
3. For threshold 0.8, precision value is highest for weight 256 and 320
4. The highest precision value occurs at weight 320 for threshold 0.85
5. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1. The Precision value is minimum at weight 128 for both thresholds.
2. for threshold 0.9, precision value for weight 320 is highest.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. At threshold 0.95, the precision value becomes 1 from weight 192 to 320 and precision value for weight 64 is tending to reach 1.

Conclusion

1. As the threshold value increases, the precision value tends to 1.
2. Precision value is lowest for weight 128 for all thresholds so bad results will be generated for weight 128
3. Thresholds from 0.5 to 0.75, precision value is highest for weight 256 so good results will be generated at these weights
4. For thresholds 0.8, precision value for weight 256 and 320 is highest so good results will be generated at these two weights
5. For threshold 0.85 and 0.9, good results will be generated at weight 320
6. For threshold 0.95, precision value for all weights except for weight 128 almost reached 1

**Image Size =256**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 320 and 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 320 for both thresholds.
3. The precision value becomes linear from weight 192 to 320 at threshold 0.65.
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 320 for threshold 0.7.
3. At threshold 0.75, precision value at weight 192 and 320 is highest
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 192 for both thresholds at for threshold 0.85 it is almost 1.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1. The Precision value is minimum at weight 128 for both thresholds.
2. precision value is highest for weight 192 for threshold 0.9
3. For threshold 0.9, precision value for weight 256 and 320 are tending to approach 1
4. For threshold 0.95, precision value for all weights except for weight 128 has reached 1
5. Nature of the graph remains the same; just it shifts upwards slightly.

Conclusion

1. As the threshold value increases, the precision value tends to 1.
2. For all thresholds, precision value is lowest at weight 128 so worst results will be generated for weight 128
3. For threshold 0.5 and 0.55, precision value is highest for weight 256 and 320
4. For threshold 0.6 to 0.7, precision value is highest for weight 320
5. For threshold 0.75, precision value is highest for weight 192 and 320
6. For threshold 0.8 to 0.9, precision value is highest for weight 192

**Image Size =320**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. Precision value at weight 192 and 320 are comparable to each other 128 for both thresholds.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128 for both thresholds.
2. The highest precision value occurs at weight 256 for both thresholds.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. Precision value at weight 192 and 320 are comparable to each other.

For threshold: 0.9 to 0.95

1. The Precision value is minimum at weight 128 for both thresholds.
2. For 0.9 threshold, precision value is highest for weight 256 and it is 1
3. Precision value for weights 192 and 320 are tending to approach 1.

Conclusion

1. As the threshold value increases, the precision value tends to 1.
2. Precision value is lowest for weight 128 for all thresholds so worst results will be generated at weight 128
3. Precision value is highest for weight 256 for all thresholds so best results will be generated at weight 256

Final Conclusion:

1. Nature of graphs may vary but always the whole graph shifts upwards with the increasing value of the threshold.
2. In general, bad results will be generated at weight 128 for all image sizes.
3. In general, Good results will be generated at weight 256 and 320.

**F1value vs Weight (Rpi tf-int8)**

**Data Set: 2**

**Weights: 64, 128, 192, 256 ,320**

**Threshold: 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95**

**Image Size =64**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 192 and weight 64 for threshold 0.5.

2)F1value is lowest at weight 192 for threshold 0.55.

3)F1value is highest for weight 320.

4) F1values at weight 64 and 128 are comparable to each other at threshold 0.55.

5)F1values at weight 256 and 320 are comparable to each other at threshold 0.55.

6)F1value is higher than 0.85 for all weights at both thresholds.

7)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 192 for threshold 0.6

2)F1value is lowest at weight 128 for threshold 0.65.

3)F1value is highest for weight 320.

4) F1values at weight 64 and 128 are comparable to each other at threshold 0.6.

5)F1values at weight 256 and 320 are comparable to each other at threshold 0.65.

6)F1values at weight 128 and 192 are comparable to each other at threshold 0.65.

7)F1value is higher than 0.9 for all weights at 0.65 threshold.

8)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest t weight 320.

3) F1values at weight 64 and 256 are comparable to each other at both thresholds.

4)F1value is higher than 0.9 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is highest at weight 320 for threshold 0.8.

2) F1value is highest at weight 256 and weight 320 for threshold 0.85.

3) F1value is lowest for weight 128 for both thresholds.

4) F1values at weight 256 and 320 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is highest at weight 256 and weight 320 for threshold 0.9.

2) F1value is highest at weights 64,192,256 and 320 which is equal to 1,for threshold 0.95.

3) F1value is lowest for weight 128 for both thresholds.

4) F1values at weight 64 and 192 are comparable to each other at threshold 0.9.

5)F1values at weight 256 and 320 are comparable to each other at threshold 0.9.

6) The f1 value for all the weights increased, this means that the graph is shifting upwards.

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

Till threshold 0.6,minimum value of F1value occurs at weight 192 but at 0.65 it surpasses and F1value becomes minimum at weight 128.

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 320.

**Image Size =128**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weight 192 and weight 256 are comparable to each other at both thresholds.

4) The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weight 192 and weight 256 are comparable to each other at both thresholds.

4)F1value is higher than 0.7 for all weights at 0.65 threshold.

5) The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is highest at weight 256 for threshold 0.7.

2) F1value is highest at weights 192 and 256 for threshold 0.75.

3) F1value is lowest for weight 128 for both thresholds.

4) F1value is higher than 0.7 for all weights at both thresholds.

5) The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 192.

3) ) F1value is higher than 0.75 for all weights at both thresholds.

4) F1values at weights 192 and 256 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is highest at weight 320,equal to 1 for threshold 0.9.

2) F1value is highest at weights 64,192 , 256 and 320 equal to 1, for threshold 0.95.

3) F1value is lowest for weight 128 for both thresholds.

4) F1value is higher than 0.8 for all weights at 0.9 threshold.

5)F1value is higher than 0.9 for all weights at 0.95 threshold.

6)The f1 value for all the weights increased, this means that the graph is shifting upwards.

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

Till threshold 0.55, maximum F1value occurs only at weight 256 but at 0.5 F1 value of weight 192 catches up and to 256 ,and both weight 192 and 256 continue to have maximum F1 value till threshold 0.8 ,but at 0.85, F1 value of weight 256 is surpassed by F1 value of weight 192.

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256.

**Image Size =192**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at 0.55 threshold.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256 and 320 for threshold 0.8.

3) F1value is highest for weight 320 for threshold 0.85.

4) F1values at weights 256 and 320 are comparable to each other at both thresholds.

5) F1value is higher than 0.65 for all weights at both thresholds.

6)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is lowest at weight 128.

2) F1value is highest for weight 192,256 and 320 and equal to 1 for both thresholds.

3) F1value is higher than 0.85 for all weights at both thresholds.

4)The f1 value for all the weights increased, this means that the graph is shifting upwards.

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

Till threshold 0.8,maximumvalue of F1value occurs at weight 256 but at 0.85 it gets surpassed and F1value becomes maximum at weight 320

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256.

**Image Size =256**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256 and 320 for threshold 0.55.

3) F1value is highest for weight 256 for threshold 0.5.

4) F1values at weights 256 and 320 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 320.

3) F1values at weights 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest for weight 320.

3) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.6 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 192.

3) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

4)F1value is higher than 0.7 for all weights at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is lowest at weight 128.

2)F1 value is highest for weight 192 which is equal to 1 for threshld 0.9.

3) F1value is highest for weight 192,256 and 320 and equal to 1 for threshold 0.95.

4) F1value is higher than 0.8 for all weights at both thresholds.

5) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

6)The f1 value for all the weights increased, this means that the graph is shifting up

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight .

Till threshold 0.6, maximum F1value occurs at weight 256 but at 0.65 it gets surpassed and F1value becomes maximum at weight 320, F1 value at weight 320 remains maximum till 0.7 threshold but at 0.75 it gets surpassed and Fl value becomes maximum at weight 192.

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256

**Image Size =320**

For threshold: 0.5 to 0.55

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.6 for all weights at both thresholds.

4)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.6 and 0.65

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.6 for all weights at both thresholds.

4) F1values at weight 192 and weight 320 are comparable to each other at 0.65 threshold.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.7 and 0.75

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.7 for all weights at 0.75 threshold.

4) F1values at weight 192 and weight 320 are comparable to each other at both thresholds.

5)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.8 and 0.85

1) F1value is lowest at weight 128.

2) F1value is highest for weight 256.

3)F1value is higher than 0.7 for all weights at 0.8 threshold.

4)F1value is higher than 0.75 for all weights at 0.85 threshold.

5) F1values at weight 192 and weight 320 are comparable to each other at 0.8 threshold.

6)The f1 value for all the weights increased, this means that the graph is shifting upwards.

For threshold: 0.9 and 0.95

1) F1value is lowest at weight 128.

2)F1 value is highest for weight 256 which is equal to 1 for threshld 0.9.

3) F1value is highest for weight 192,256 and 320 and equal to 1 for threshold 0.95.

4) F1value is higher than 0.9 for all weights at 0.95 threshold.

5) F1values at weights 192, 256 and 320 are comparable to each other at both thresholds.

6)The f1 value for all the weights increased, this means that the graph is shifting up

Conclusion:

As the threshold value increases, the nature of graph is becoming as a straight

The F1 value overall remains lowest for weight of 128.

The F1 value overall remains highest for weight of 256.

**Overall Conclusion:**

In general, overall performance of weight of 128 is weakest.

In general,overall performance of weight of 256 is best.

For image size 64 the overall best performance is at weight of 320.

For image size 128 the overall best performance is at weight of 192 and weight 256 .

**Precision vs Weight**

**Data Set: 2 (rpi tf int8)**

**Weights: 64, 128, 160, 320**

**Threshold: 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95**

**Image Size =64**

For threshold: 0.5 to 0.55

1. At threshold 0.5, precision value at weight 64 and 192 are comparable to each other (which is lowest at that 0.5 threshold).
2. At threshold 0.55, the precision value becomes lowest for weight 192.
3. The highest precision value occurs at weight 320.
4. Nature of graph remains same just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. At threshold 0.6, precision value at weight 128 and 192 are comparable to each other (which is lowest at that 0.6 threshold.
2. At threshold 0.65, the precision value becomes lowest for weight 128.
3. The highest precision value occurs at weight 320.
4. Graph shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The precision value becomes lowest for weight 128.
2. The highest precision value occurs at weight 320.
3. Graph shifts upwards slightly.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128.
2. The highest precision value at weight 320.
3. At threshold 0.85, the precision value at weight 256 and 320 are comparable to each other.
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1) The Precision value is minimum at weight 128.

2) Precision values at weight 192 and 256 are comparable to each other.

3)Nature of the graph remains the same; just it shifts upwards slightly.

4)At threshold 0.95,the precision value becomes 1 from weight 192 to 320.

Conclusion

As the threshold value increases, the nature of graph is becoming as a straight line.

Till threshold equal to 0.6, the minimum Precision value occurs at weight 192 and above threshold value of 0.65, it occurs at weight 128.

Precision value occurs maximum at weight 320 for all values of threshold.

Maximum value of Precision value is 1 which occurs at threshold 0.95.

Minimum value of Precision value is 0.79 which occurs at threshold 0.5.

**Image Size =128**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128.
2. The highest precision value at weight 256.
3. Precision value at weight 192 and 256 are comparable to each other.
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128.
2. At threshold 0.6, The precision value at weight 192 and 256 are comparable to each other (which is highest in this range of threshold).
3. Nature of graph remains same; just it shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128.
2. At threshold 0.7, precision value at weight 192 and 256 are comparable to each other (which is highest at that 0.7 threshold).
3. At threshold 0.75, the precision value becomes highest at weight 192.
4. Nature of graph remains same; just it shifts upwards slightly.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128.
2. At threshold 0.8, precision value at weight 192 and 256 are comparable to each other (which is highest at that 0.7 threshold).
3. At threshold 0.85, the precision value becomes highest at weight 192.
4. Nature of graph remains same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1 The Precision value is minimum at weight 128.

2) Precision values at weight 192 and 256 are comparable to each other.

3)Nature of the graph remains the same; just it shifts upwards slightly.

4)At threshold 0.95,the precision value becomes 1 from weight 192 to 320.

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Conclusion

As the threshold value increases, the precision value tends to 1.

Maximum value of precision value is 1 which occurs at threshold 0.95 except at weight 128.

Minimum value of precision value is 0.55 which occurs at threshold 0.5.

Precision value is lowest at weight 128 for all threshold values.

***The precision value at weight 192 and 256 are comparable (which is maximum).***

**Image Size =192**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 256.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 256.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. The precision value at weight 64 is less than that at 192.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 256.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. The precision value at weight 256 and 320 are comparable to each other.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128.
2. The precision value at weight 256 and 320 are comparable to each other at both threshold values.
3. The highest precision value occurs at weight 320.
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1 The Precision value is minimum at weight 128.

2) Precision values at weight 192 and 256 are comparable to each other.

3)Nature of the graph remains the same; just it shifts upwards slightly.

4)At threshold 0.95,the precision value becomes 1 from weight 192 to 320.

Conclusion

As the threshold value increases, the precision value tends to 1.

Maximum value of precision value is 1 which occurs at threshold 0.95.

Minimum value of precision value is less than 0.5 which occurs at threshold 0.5.

Till threshold 0.8, maximum precision value occurs at weight 256 but at 0.85 it gets surpassed and precision value becomes maximum at weight 320.

Minimum precision value occurs at weight 128 for all threshold values.

**Image Size =256**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 320.
3. The precision value at weight 256 and 320 are comparable to each other.
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 320.
3. The precision value becomes linear from weight 192 to 320 at threshold 0.65.
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 320.
3. At threshold 0.75, precision value at weight 192 and 320 are comparable to each other (which is highest at that 0.75 threshold).
4. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 192.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.9 to 0.95

1 The Precision value is minimum at weight 128.

2) Precision values at weight 192 and 256 are comparable to each other.

3)Nature of the graph remains the same; just it shifts upwards slightly.

4)At threshold 0.95,the precision value becomes 1 from weight 192 to 320.

Conclusion

As the threshold value increases, the precision value tends to 1.

Maximum value of precision value is 1 which occurs at threshold 0.95 except at weight 128.

Minimum value of precision value is less than 0.5 which occurs at threshold 0.5.

Minimum precision value occurs for weight 128 for all threshold values.

***Till threshold 0.7,the precision value are comparable at weight 256 and 320 threshold 0.75, maximum value of precision value are compared to each other at weights 192 and 320 and onwards 0.8, it gets maximum at weight 192.***

**Image Size =320**

For threshold: 0.5 to 0.55

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 256.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.6 to 0.65

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 256.
3. Nature of the graph remains the same; just it shifts upwards slightly.

For threshold: 0.7 to 0.75

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 256.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. Precision value at weight 192 and 320 are comparable to each other.

For threshold: 0.8 to 0.85

1. The lowest precision value occurs at weight 128.
2. The highest precision value occurs at weight 256.
3. Nature of the graph remains the same; just it shifts upwards slightly.
4. Precision value at weight 192 and 320 are comparable to each other.

For threshold: 0.9 to 0.95

1) The Precision value is minimum at weight 128.

2) Precision value at weight 192 and 256 are comparable to each other.

3)Nature of the graph remains the same; just it shifts upwards slightly.

4)At threshold 0.95,the precision value becomes 1 from weight 192 to 320.

Conclusion

As the threshold value increases, the precision value tends to 1.

Maximum value of precision value is 1 which occurs at threshold 0.95 except at weight 128.

Minimum value of precision value is less than 0.5 which occurs at threshold 0.5.

Minimum precision value occurs for weight 128 for all threshold values.

Maximum precision value occurs for weight 256 for all threshold values.

Final Conclusion:

Nature of graphs may vary but always the whole graph shifts upwards with the increasing value of the threshold.

In general, the performance at weight 64 is best.