# Appendix C. Detailed segmentation statistics.

The tables is this appendix show distribution statistics, by finger position, for the segmentation algorithms tested as compared to the hand marked ground truth for 3-inch slap images. The differences between the segmentation algorithm and ground truth are sorted into bins based on the tolerances allowed for correct segmentation. Specifically, the left/right edges must be within -32/+64 pixels of the ground truth, top edge -64/+64 and bottom edge -64/+128. For each finger position there is a column for each of the four segmentation box edges (L, R, T and B).

The first row ("No Finger Found") shows the counts for when a finger was not detected by the segmentation algorithm. The next four rows show statistics for segmentation edges that are within the specified minimum (MN) and maximum (MX) pixel tolerances compared to the ground truth, so these are considered good segmentations. Rows 1 (MN <= d < 0) and 3 (0 <= d <= MX) show the average value for all differences in that range and rows 3 and 5 show the total count occurring in that range.

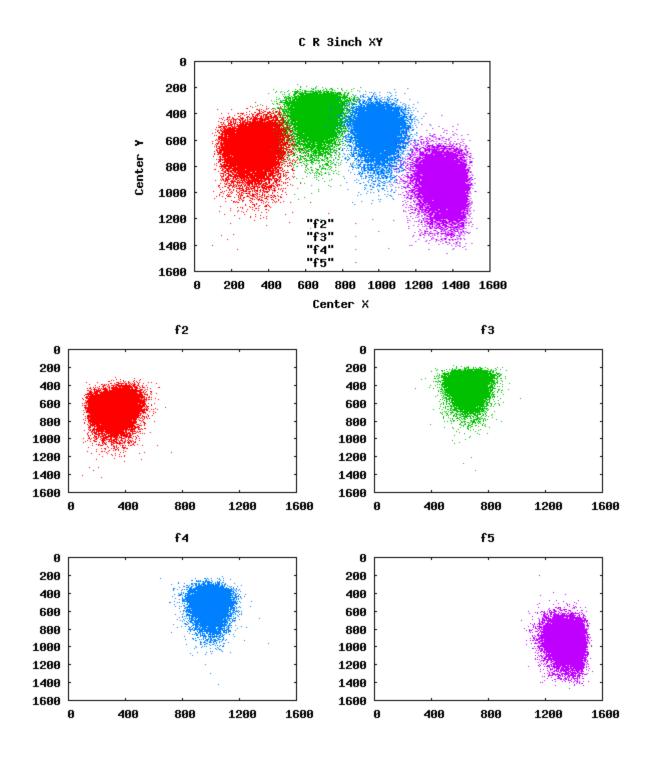
Rows 6-9 also show average difference values and bin counts but for ranges MN-32 <= d < MN and MX < d <= MX+32, which are just outside the accepted tolerance ranges. Rows 10-13 tally everything greater than 32 pixels away from the accepted tolerance range, d < MN-32 and d > MX+32.

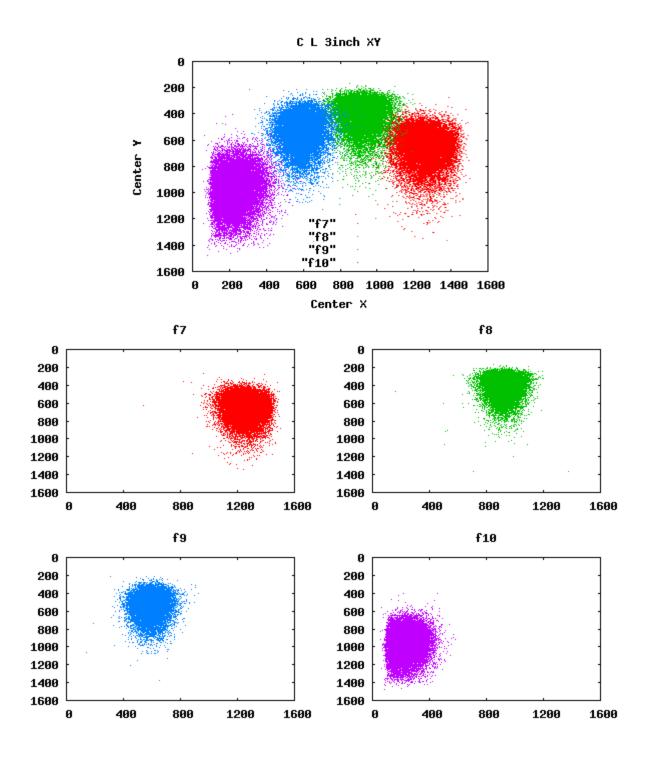
The last three rows show the total count for each bin, the overall average difference value and the standard deviation of all the difference values.

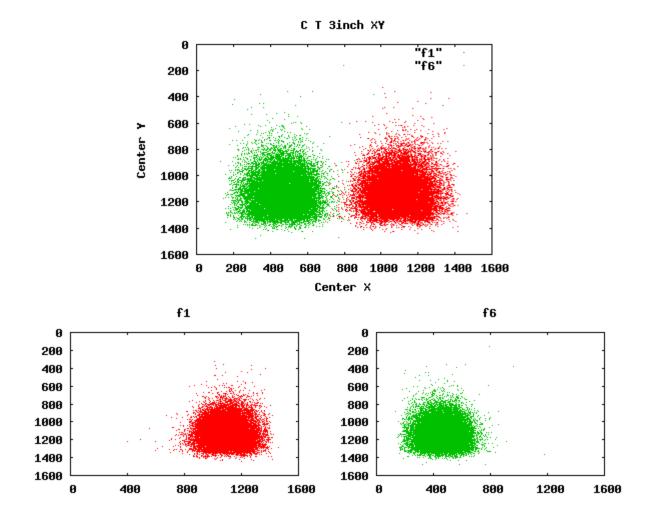
										С										
No Finger Found	R. Thumb				R. Index 3				R Middle 5				R. Ring 7				R. Little 19			
No Finger Found	L	R	т	В	L	R	т	в	L	R	т	в	L	R	, т	в	L	R	T	В
MN <= d < 0	-6.29	-8.12	-9.53	-19.31	-6.30	-6.26	-8.07	-12.10	-5.05	-6.49	-8.18	-15.80	-4.56	-8.27	-7.41	-15.63	-5.39	-6.46	-9.17	-12.85
#	1555	2809	7521	12352	866	568	13852	1543	662	655	14584	2069	303	1409	13778	1834	713	2867	11784	1784
0 <= d <= MX	21.08	17.86	12.50	26.05	13.91	17.65	10.33	31.92	15.31	17.10	11.50	35.85	18.23	16.51	11.40	36.02	14.26	13.76	10.73	30.57
#	22825	21453	16825	11414	24081	24378	11096	23340	24294	24298	10372	22733	24647	23533	11176	22876	24234	22050	13145	23077
MN-32 <= d < MN	-55.00	-42.12	-78.34	-76.48	-44.00	-41.43	-68.00	-73.00	-36.00	-43.33	-74.33	-76.04	-35.50	-39.00	-77.80	-77.84	-42.43	-39.71	-70.80	-76.78
#	5	86	29	460	8	7	1	20	1	3	3	67	2	11	5	123	7	31	20	37
MX < d <= MX+32	78.75	74.33	66.00	142.04	70.50	77.33	77.25	139.77	74.25	76.25	#DIV/0!	139.81	77.20	77.00	78.00	140.88	75.67	80.19	74.00	141.92
#	4	21	1	23	2	3	4	32	4	4	0	52	5	4	2	73	3	8	1	19
d < MN-32	-373.85	-426.61	-421.94	-177.86	-285.44	-225.50	-584.40	-131.00	-437.00	-806.50	-280.50	-188.92	-590.40	-761.00	-411.50	-137.83	-412.13	-1489.31	-360.93	-439.52
# d > MX+32	26 600.29	31 689.64	40 1063.50	140 706.88	9 160.00	1 473.50	15 #DIV/0!	8 634.82	6 555.50	1 508.43	7 333.75	19 270.29	5 429.17	3 518.00	6 358.50	41 306.24	4 932.07	8 428.13	7 555.41	22 270.22
u > IVIX+32 #	7	22	6	33	2	473.30	#DIV/0!	25	1	7	2	270.29	429.17	8	1	21	7	420.15	11	270.22
"	,	22	Ū	55	2		Ū	25	-	,	-	20	Ū	0	-		,	-	11	25
Total #	24422	24422	24422	24422	24968	24968	24968	24968	24968	24968	24968	24968	24968	24968	24968	24968	24968	24968	24968	24968
Average	19.08	14.75	5.16	1.04	13.10	17.29	-0.23	29.80	14.69	16.59	-0.06	31.58	17.94	15.17	0.92	31.92	13.88	10.98	1.41	27.26
Std Dev	22.51	39.78	30.96	52.46	10.38	13.88	20.99	32.45	11.93	13.80	13.94	28.75	14.38	17.77	14.12	29.73	20.83	37.11	20.30	31.12
Std Dev	22.51			52.46	10.38			32.45	11.93			28.75	14.38			29.73	20.83			31.12
	22.51	L. TI	humb	52.46	10.38	L. Ir	20.99 ndex 0	32.45	11.93	L. M	13.94 iddle 0	28.75	14.38	L. I	14.12 Ring 7	29.73	20.83	L. L	ittle	31.12
Std Dev No Finger Found	22.51 L	L. TI		52.46 <b>B</b>	10.38 L	L. Ir	ndex	32.45 <b>B</b>	11.93 L	L. M	iddle	28.75 <b>B</b>	14.38 L	L. I	Ring	29.73 B	20.83 L	L. L		31.12 B
		L. TI	humb 23			L. Ir	ndex D			L. M	iddle 0			L. I	Ring 7			L. L 1	ittle 16	
No Finger Found MN <= d < 0 #	L -7.18 3399	L. TI 2 R -5.71 562	humb 23 T -8.83 8569	<b>B</b> -19.02 12199	L -4.70 435	L. Ir R -8.88 1484	ndex 0 T -8.04 13617	<b>B</b> -11.92 1565	L -4.06 591	L. M R -6.91 858	iddle 0 T -8.43 14364	<b>B</b> -16.12 2321	L -4.33 724	R -7.64 608	Ring 7 7 -7.14 13279	<b>B</b> -15.86 2565	L -8.42 2621	L. L 1 R -7.96 968	ittle L6 T -9.59 11203	<b>B</b> -12.80 2135
No Finger Found	L -7.18 3399 16.97	L. TI R -5.71 562 22.09	humb 23 T -8.83 8569 12.35	<b>B</b> -19.02 12199 25.74	L -4.70 435 16.17	L. Ir R -8.88 1484 17.25	ndex D T -8.04 13617 10.33	<b>B</b> -11.92 1565 31.64	L -4.06 591 15.52	L. M R -6.91 858 18.60	iddle 0 T -8.43 14364 11.33	<b>B</b> -16.12 2321 35.15	L -4.33 724 15.37	R -7.64 608 19.87	Ring 7 -7.14 13279 12.57	<b>B</b> -15.86 2565 32.68	L -8.42 2621 13.78	L. L 1 -7.96 968 17.86	ittle 16 -9.59 11203 11.36	B -12.80 2135 28.81
No Finger Found MN <= d < 0 #	L -7.18 3399	L. TI 2 R -5.71 562	humb 23 T -8.83 8569	<b>B</b> -19.02 12199	L -4.70 435	L. Ir R -8.88 1484	ndex 0 T -8.04 13617	<b>B</b> -11.92 1565	L -4.06 591	L. M R -6.91 858	iddle 0 T -8.43 14364	<b>B</b> -16.12 2321	L -4.33 724	R -7.64 608	Ring 7 7 -7.14 13279	<b>B</b> -15.86 2565	L -8.42 2621	L. L 1 R -7.96 968	ittle L6 T -9.59 11203	<b>B</b> -12.80 2135
No Finger Found MN <= d < 0 # 0 <= d <= MX #	L -7.18 3399 16.97 20873	L. TI R -5.71 562 22.09 23798	humb 23 -8.83 8569 12.35 15781	<b>B</b> -19.02 12199 25.74 11695	L -4.70 435 16.17 24504	L. Ir R -8.88 1484 17.25 23440	ndex 0 -8.04 13617 10.33 11329	<b>B</b> -11.92 1565 31.64 23330	L -4.06 591 15.52 24347	L. M R -6.91 858 18.60 24080	iddle 0 -8.43 14364 11.33 10577	<b>B</b> -16.12 2321 35.15 22454	L -4.33 724 15.37 24218	R -7.64 608 19.87 24327	Ring 7 -7.14 13279 12.57 11663	<b>B</b> -15.86 2565 32.68 22148	L -8.42 2621 13.78 22297	L. L 1 7.96 968 17.86 23950	ittle 16 -9.59 11203 11.36 13709	<b>B</b> -12.80 2135 28.81 22704
No Finger Found MN <= d < 0 #	L -7.18 3399 16.97	L. TI R -5.71 562 22.09	humb 23 T -8.83 8569 12.35	<b>B</b> -19.02 12199 25.74	L -4.70 435 16.17	L. Ir R -8.88 1484 17.25	ndex D T -8.04 13617 10.33	<b>B</b> -11.92 1565 31.64	L -4.06 591 15.52	L. M R -6.91 858 18.60	iddle 0 T -8.43 14364 11.33	<b>B</b> -16.12 2321 35.15	L -4.33 724 15.37	R -7.64 608 19.87	Ring 7 -7.14 13279 12.57	<b>B</b> -15.86 2565 32.68	L -8.42 2621 13.78	L. L 1 -7.96 968 17.86	ittle 16 -9.59 11203 11.36	B -12.80 2135 28.81
No Finger Found MN <= d < 0 # 0 <= d <= MX #	L -7.18 3399 16.97 20873	L. TI R -5.71 562 22.09 23798 -44.31	humb 23 T -8.83 8569 12.35 15781 -75.56	<b>B</b> -19.02 12199 25.74 11695 -77.19	L -4.70 435 16.17 24504	L. Ir R -8.88 1484 17.25 23440 -36.46	ndex 0 T -8.04 13617 10.33 11329 -82.88	<b>B</b> -11.92 1565 31.64 23330 -75.96	L -4.06 591 15.52 24347 -39.33	L. M R -6.91 858 18.60 24080 -40.25	iddle 0 -8.43 14364 11.33 10577 -76.00	<b>B</b> -16.12 2321 35.15 22454 -76.63	L -4.33 724 15.37 24218 #DIV/0!	L. I R -7.64 608 19.87 24327 -42.71	Ring 7 T -7.14 13279 12.57 11663	<b>B</b> -15.86 2565 32.68 22148 -78.65	L -8.42 2621 13.78 22297 -39.00	L. L 1 R -7.96 968 17.86 23950 -39.11	ittle 16 T -9.59 11203 11.36 13709 -69.82	<b>B</b> -12.80 2135 28.81 22704
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN #	L -7.18 3399 16.97 20873 -43.96 67	L. TI R -5.71 562 22.09 23798 -44.31 16	humb 23 T -8.83 8569 12.35 15781 -75.56 27	<b>B</b> -19.02 12199 25.74 11695 -77.19 332	L -4.70 435 16.17 24504 -37.00 1	L. Ir R -8.88 1484 17.25 23440 -36.46 28	ndex 0 T -8.04 13617 10.33 11329 -82.88 8	<b>B</b> -11.92 1565 31.64 23330 -75.96 25	L -4.06 591 15.52 24347 -39.33 3	L. M -6.91 858 18.60 24080 -40.25 4	iddle 0 T -8.43 14364 11.33 10577 -76.00 8	<b>B</b> -16.12 2321 35.15 22454 -76.63 64	L -4.33 724 15.37 24218 #DIV/0! 0	L. I R -7.64 608 19.87 24327 -42.71 7	Ring 7 T -7.14 13279 12.57 11663 -70.00 2	<b>B</b> -15.86 2565 32.68 22148 -78.65 136	L -8.42 2621 13.78 22297 -39.00 20	L. L 7.96 968 17.86 23950	ittle 16 T -9.59 11203 11.36 13709 -69.82 19	<b>B</b> -12.80 2135 28.81 22704 -74.79 28
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN # MX < d <= MX+32 #	L -7.18 3399 16.97 20873 -43.96 67 74.79 39	L. TI R -5.71 562 22.09 23798 -44.31 16 82.00 3	humb 23 -8.83 8.869 12.35 15781 -75.56 27 67.00 1	<b>B</b> -19.02 12199 25.74 11695 -77.19 332 141.84 31	L -4.70 435 16.17 24504 -37.00 1 71.50 10	L. Ir R -8.88 1484 17.25 23440 -36.46 28 #DIV/0! 0	ndex 0 T -8.04 13617 10.33 11329 -82.88 8 #DIV/0! 0	<b>B</b> -11.92 1565 31.64 23330 -75.96 25 140.86 14	L -4.06 591 15.52 24347 -39.33 3 77.14 7	L. M R -6.91 858 18.60 24080 -40.25 4 70.17 6	iddle 0 T -8.43 14364 11.33 10577 -76.00 8 80.50 2	<b>B</b> -16.12 2321 35.15 22454 -76.63 64 139.02 64	L -4.33 724 15.37 24218 #DIV/0! 0 69.13 8	L I R -7.64 608 19.87 24327 -42.71 7 4.40 5	Ring 7 -7.14 13279 12.57 11663 -70.00 2 76.00 1	B     -15.86     2565     32.68     22148     -78.65     136     139.73     51	L -8.42 2621 13.78 22297 -39.00 20 81.44 9	L. L 1 7.7.96 968 17.86 23950 -39.11 22 79.00 2	ittle 16 -9.59 11203 11.36 13709 -69.82 19 65.00 1	B     -12.80     2135     28.81     22704     -74.79     28     143.16     35
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN #	L -7.18 3399 16.97 20873 -43.96 67 74.79 39 -268.90	L. TI R -5.71 22.09 23798 -44.31 16 82.00 3 -448.90	humb 23 T 8569 12.35 15781 -75.56 27 67.00 1 -384.94	<b>B</b> -19.02 12199 25.74 11695 -77.19 332 141.84 31 -309.73	L -4.70 435 16.17 24504 -37.00 1 71.50 10 -961.04	L. Ir R -8.88 1484 17.25 23440 -36.46 28 #DIV/0! 0	ndex 7 -8.04 13617 10.33 11329 -82.88 8 #DIV/0! 0 -430.20	<b>B</b> -11.92 1565 31.64 23330 -75.96 25 140.86 14 -125.29	L -4.06 591 15.52 24347 -39.33 3 77.14 7 -605.22	L. M R -6-91 858 18.60 24080 -40.25 4 70.17 6 -395.50	iddle 0 T -8.43 14364 11.33 10577 -76.00 8 80.50 2 -585.35	<b>B</b> -16.12 2321 35.15 22454 -76.63 64 139.02 64 -113.70	L -4.33 724 15.37 24218 #DIV/0! 0 69.13 8 -415.00	R -7.64 608 19.87 24327 -42.71 7 74.40 5 -701.22	Ring 7 7 -7.14 13279 12.57 11663 -70.00 2 76.00 1 1 -522.08	<b>B</b> -15.86 2565 32.68 22148 -78.65 136 139.73 51 -197.12	L -8.42 2621 13.78 22297 -39.00 20 81.44 9 -171.90	L. L 1 7 968 17.86 23950 -39.11 22 79.00 2 -370.42	ittle 16 T -9.59 11203 11.36 13709 -69.82 19 65.00 1 -473.69	<b>B</b> -12.80 2135 28.81 22704 -74.79 28 143.16 35 -562.39
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN # MX < d <= MX+32 # d < MN-32 #	L -7.18 3399 16.97 20873 -43.96 67 74.79 39 -268.90 24	L. TI R -5.71 562 22.09 23798 -44.31 16 82.00 3 -448.90 34	humb 23 7 8.83 8569 12.35 15781 15781 4 67.00 1 1 2 8.84 94 24	<b>B</b> -19.02 12199 25.74 11695 -77.19 332 141.84 31 -309.73 132	L -4.70 435 16.17 24504 -37.00 1 71.50 10 -961.04 12	L. Ir R -8.88 1484 17.25 23440 -36.46 28 #DIV/0! 0 #DIV/0! 0	hdex - - - - - - - - - - - - -	B     -11.92     1565     31.64     23330     -75.96     25     140.86     14     -125.29     7	L -4.06 591 15.52 24347 -39.33 3 77.14 7 -605.22 9	L. M R -6.91 858 18.60 24080 -40.25 4 70.17 6 -395.50 6	iddle D - - - - - - - - - - - - -	8     -16.12     2321     35.15     22454     -76.63     64     139.02     64     -113.70     20	L -4.33 724 15.37 24218 #DIV/0! 0 69.13 8 -415.00 5	R 7.64 608 19.87 23327 -42.71 7 74.40 5 -701.22 9	Ring 7 7.14 13279 12.57 11663 -70.00 2 76.00 1 2 76.00 1 2 76.00 1	B     -15.86     2565     32.68     22148     -78.65     136     139.73     51     -197.12     42	L -8.42 2621 13.78 22297 -39.00 20 81.44 9 -171.90 5	L. L 1 7 968 17.86 23950 -39.11 22 79.00 2 -370.42 12	ittle 16 T -9.59 11203 11.36 13709 -69.82 19 65.00 1 -473.69 18	B     -12.80     2135     28.81     22704     -74.79     28     143.16     35     -562.39     23
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN # MX < d <= MX+32 #	L -7.18 3399 16.97 20873 -43.96 67 74.79 39 -268.90 24 338.03	L. TI R -5.71 562 22.09 23798 -44.31 16 82.00 3 -448.90 34 804.06	humb 23	<b>B</b> -19.02 12199 25.74 11695 -77.19 332 141.84 31 -309.73 132 414.48	L -4.70 435 16.17 24504 -37.00 1 71.50 10 -961.04 12 115.00	L. Ir R -8.88 1484 17.25 23440 -36.46 28 #DIV/0! 0 #DIV/0! 0 1234.79	hdex 	B     -11.92     1565     31.64     23330     -75.96     25     140.86     14     -125.29     7     517.24	L -4.06 591 15.52 24347 -39.33 3 77.14 7 -605.22 9 385.29	L. M R -6.91 858 18.60 24080 -40.25 4 70.17 6 -395.50 6 848.80	iddle 	8     -16.12     2321     35.15     22454     -76.63     64     139.02     64     -113.70     20     431.52	L -4.33 724 15.37 24218 #DIV/0! 0 69.13 8 -415.00 5 602.11	R -7.64 608 19.87 24327 -42.71 7 74.40 5 -701.22 9 496.94	Ring 7 -7.14 13279 12.57 11663 -70.00 2 76.00 1 7 76.00 1 7 76.00 1 76.00 1 7 7 76.00 1 7 77.00 7 7 7 76.00 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	B     -15.86     2565     32.68     22148     -78.65     136     139.73     51     -197.12     42     502.73	L -8.42 2621 13.78 22297 -39.00 20 81.44 9 -171.90 5 197.00	L. L 1 R -7.96 968 17.86 23950 -39.11 22 79.00 2 79.00 2 -370.42 12 307.40	ittle .6 T -9.59 11203 11.36 13709 .69.82 19 65.00 1 .473.69 18 557.14	B     -12.80     2135     28.81     22704     -74.79     28     143.16     35     -562.39     23     409.56
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN # MX < d <= MX+32 # d < MN-32 #	L -7.18 3399 16.97 20873 -43.96 67 74.79 39 -268.90 24	L. TI R -5.71 562 22.09 23798 -44.31 16 82.00 3 -448.90 34	humb 23 7 8.83 8569 12.35 15781 15781 4 67.00 1 1 2 8.84 94 24	<b>B</b> -19.02 12199 25.74 11695 -77.19 332 141.84 31 -309.73 132	L -4.70 435 16.17 24504 -37.00 1 71.50 10 -961.04 12	L. Ir R -8.88 1484 17.25 23440 -36.46 28 #DIV/0! 0 #DIV/0! 0	hdex - - - - - - - - - - - - -	B     -11.92     1565     31.64     23330     -75.96     25     140.86     14     -125.29     7	L -4.06 591 15.52 24347 -39.33 3 77.14 7 -605.22 9	L. M R -6.91 858 18.60 24080 -40.25 4 70.17 6 -395.50 6	iddle D - - - - - - - - - - - - -	8     -16.12     2321     35.15     22454     -76.63     64     139.02     64     -113.70     20	L -4.33 724 15.37 24218 #DIV/0! 0 69.13 8 -415.00 5	R 7.64 608 19.87 23327 -42.71 7 74.40 5 -701.22 9	Ring 7 7.14 13279 12.57 11663 -70.00 2 76.00 1 2 76.00 1 2 76.00 1	B     -15.86     2565     32.68     22148     -78.65     136     139.73     51     -197.12     42	L -8.42 2621 13.78 22297 -39.00 20 81.44 9 -171.90 5	L. L 1 7 968 17.86 23950 -39.11 22 79.00 2 -370.42 12	ittle 16 T -9.59 11203 11.36 13709 -69.82 19 65.00 1 -473.69 18	B     -12.80     2135     28.81     22704     -74.79     28     143.16     35     -562.39     23
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN # MX < d <= MX+32 # d < MN-32 #	L -7.18 3399 16.97 20873 -43.96 67 74.79 39 -268.90 24 338.03	L. TI R -5.71 562 22.09 23798 -44.31 16 82.00 3 -448.90 34 804.06	humb 23	<b>B</b> -19.02 12199 25.74 11695 -77.19 332 141.84 31 -309.73 132 414.48	L -4.70 435 16.17 24504 -37.00 1 71.50 10 -961.04 12 115.00	L. Ir R -8.88 1484 17.25 23440 -36.46 28 #DIV/0! 0 #DIV/0! 0 1234.79	hdex - - - - - - - - - - - - -	B     -11.92     1565     31.64     23330     -75.96     25     140.86     14     -125.29     7     517.24	L -4.06 591 15.52 24347 -39.33 3 77.14 7 -605.22 9 385.29	L. M R -6.91 858 18.60 24080 -40.25 4 70.17 6 -395.50 6 848.80	iddle 	8     -16.12     2321     35.15     22454     -76.63     64     139.02     64     -113.70     20     431.52	L -4.33 724 15.37 24218 #DIV/0! 0 69.13 8 -415.00 5 602.11	R -7.64 608 19.87 24327 -42.71 7 74.40 5 -701.22 9 496.94	Ring 7 -7.14 13279 12.57 11663 -70.00 2 76.00 1 7 76.00 1 7 76.00 1 76.00 1 7 7 76.00 1 7 77.00 7 7 7 76.00 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	B     -15.86     2565     32.68     22148     -78.65     136     139.73     51     -197.12     42     502.73	L -8.42 2621 13.78 22297 -39.00 20 81.44 9 -171.90 5 197.00	L. L 1 R -7.96 968 17.86 23950 -39.11 22 79.00 2 79.00 2 -370.42 12 307.40	ittle .6 T -9.59 11203 11.36 13709 .69.82 19 65.00 1 .473.69 18 557.14	B     -12.80     2135     28.81     22704     -74.79     28     143.16     35     -562.39     23     409.56
No Finger Found MN <= d < 0 # 0 <= d <= MX # MN-32 <= d < MN # MX < d <= MX+32 # d < MN-32 # d > MX+32 #	L -7.18 3399 16.97 20873 -43.96 67 74.79 39 -268.90 24 338.03 20	L. TI R -5.71 562 22.09 23798 -44.31 16 82.00 3 3 -448.90 34 804.06 9	humb 23 T -8.83 8569 12.35 15781 -75.56 27 67.00 1 -75.56 27 67.00 1 -384.94 24 929.33 20	<b>B</b> -19.02 12199 25.74 11695 -77.19 332 141.84 31 -309.73 132 414.48 33	L -4.70 435 16.17 24504 -37.00 1 71.50 10 -961.04 12 115.00 2	L. Ir R -8.88 1484 17.25 23440 -36.46 28 #DIV/01 0 #DIV/01 0 1234.79 12	hdex 0 T -8.04 13617 10.33 11329 -82.88 8 #DIV/01 0 -430.20 10 WDIV/01 0	B     -11.92     1565     31.64     23330     -75.96     25     140.86     14     -125.29     7     517.24     23	L -4.06 591 15.52 24347 -39.33 3 77.14 7 -605.22 9 385.29 7	L. M R -6-91 858 18.60 24080 -40.25 4 70.17 6 -395.50 6 848.80 10	iddle 0 T -8.43 14364 11.33 10577 -76.00 8 80.50 2 -585.35 13 #DIV/0! 0	B     -16.12     2321     35.15     22454     -76.63     64     139.02     64     -113.70     20     431.52     41	L -4.33 724 15.37 24218 #DIV/0! 0 69.13 8 -415.00 5 602.11 9	R -7.64 608 19.87 24327 -42.71 7 74.40 5 -701.22 9 496.94 8	Ring 7 -7.14 13279 12.57 11663 -70.00 2 76.00 1 -522.08 12 365.29 7	B     -15.86     2565     32.68     22148     -78.65     136     139.73     51     -197.12     42     502.73     22	L -8.42 2621 13.78 22297 -39.00 20 81.44 9 -171.90 5 197.00 12	L. L 1 7.7.96 968 17.86 23950 -39.11 22 79.00 2 -370.42 12 307.40 10	ittle 16 T -9.59 11203 11.36 13709 -69.82 19 65.00 1 -473.69 18 557.14 14	B   -12.80   2135   28.81   22704   -74.79   28   143.16   35   -562.39   23   409.56   39

# Appendix D. Plots of 3-inch segmentation box centers.

The plots in this appendix show the distribution of the segmentation box centers (x,y) for the 3-inch data. There is a combined plot for each slap image and then a smaller plot for each finger position. The individual finger plots are better for seeing the full "spread" of x,y positions detected. The plot for the ground truth (GT) is included as a baseline for comparison. The blank lines that appear in some of the plots are most likely caused by the segmentation algorithm doing some level of sampling of the input image. The reason the lines are not evenly distributed in some plots is an artifact of the sampling when scaling the images for displaying in the report.

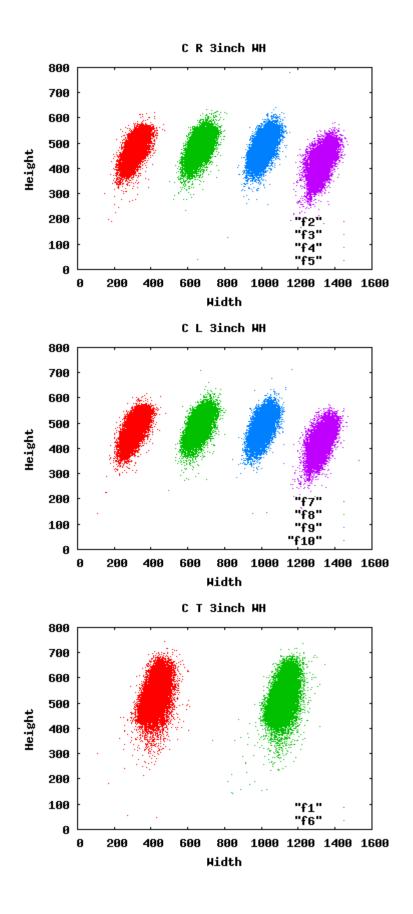






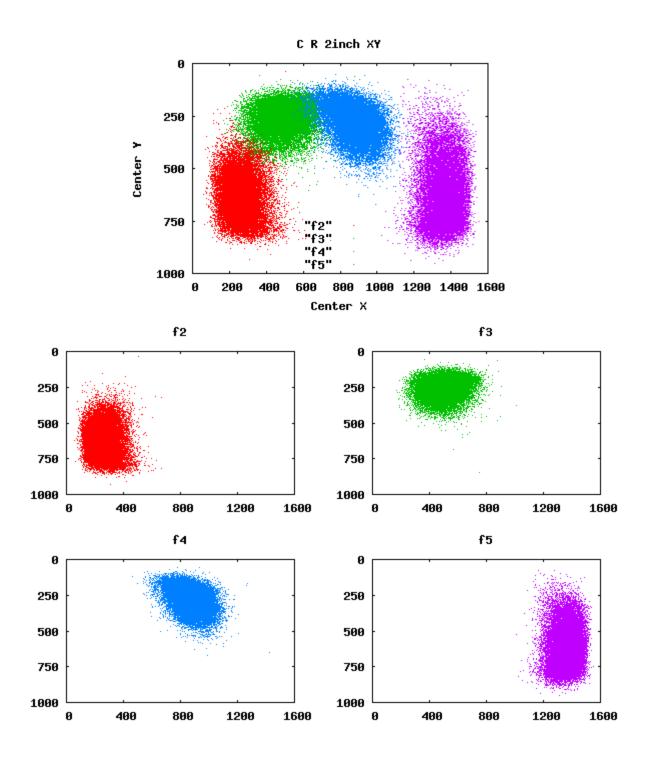
### Appendix E. Plots of 3-inch segmentation box widths and heights.

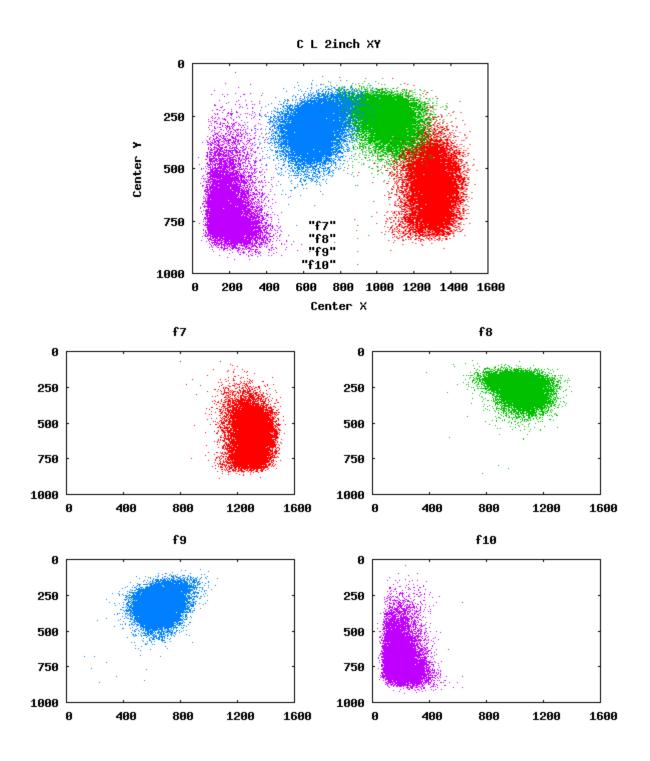
The plots in this appendix show the distribution of the segmentation box widths and heights for the 3-inch data. There is a combined plot for each slap image and then a smaller plot for each finger position. The individual finger plots are better for seeing the full "spread" of widths and heights detected. The widths are "spread out" on the plot by adding 350, 750 and 1050 to the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> widths plotted. The plot for the ground truth (GT) is included as a baseline for comparison. The blank lines that appear in some of the plots are most likely caused by the segmentation algorithm doing some level of sampling of the input image. The reason the lines are not evenly distributed in some plots is an artifact of the sampling when scaling the images for displaying in the report.



# Appendix F. Plots of 2-inch segmentation box centers.

The plots in this appendix show the distribution of the segmentation box centers (x,y) for the 2-inch data. There is a combined plot for each slap image and then a smaller plot for each finger position. The individual finger plots are better for seeing the full "spread" of x,y positions detected. The plot for the ground truth (GT) is included as a baseline for comparison. The blank lines that appear in some of the plots are most likely caused by the segmentation algorithm doing some level of sampling of the input image. The reason the lines are not evenly distributed in some plots is an artifact of the sampling when scaling the images for displaying in the report.





### Appendix G. Plots of 2-inch segmentation box widths and heights.

The plots in this appendix show the distribution of the segmentation box widths and heights for the 2-inch data. There is a combined plot for each slap image and then a smaller plot for each finger position. The individual finger plots are better for seeing the full "spread" of widths and heights detected. The widths are "spread out" on the plot by adding 350, 750 and 1050 to the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> widths plotted. The plot for the ground truth (GT) is included as a baseline for comparison. The blank lines that appear in some of the plots are most likely caused by the segmentation algorithm doing some level of sampling of the input image. The reason the lines are not evenly distributed in some plots is an artifact of the sampling when scaling the images for displaying in the report.

