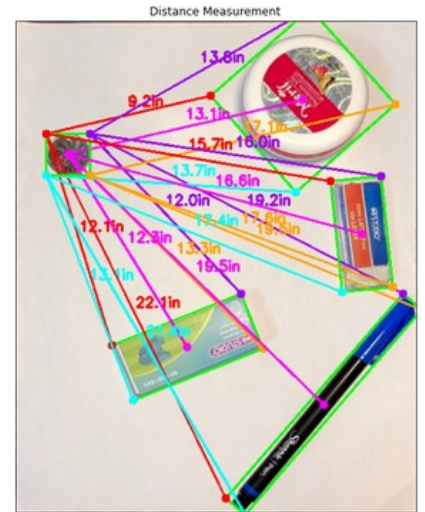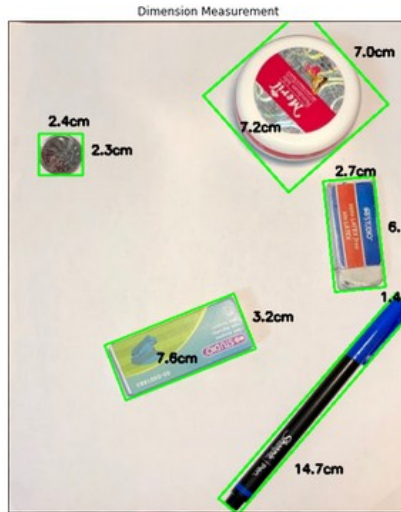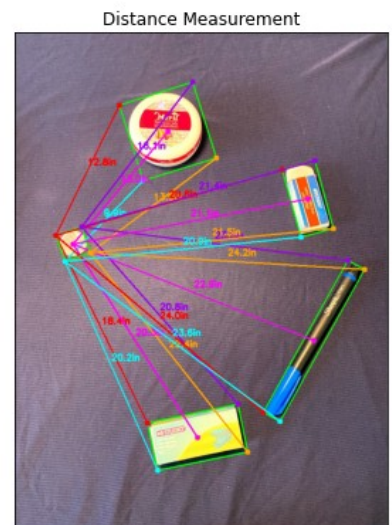# APPENDIX

SUPPLEMENTAL IMAGES
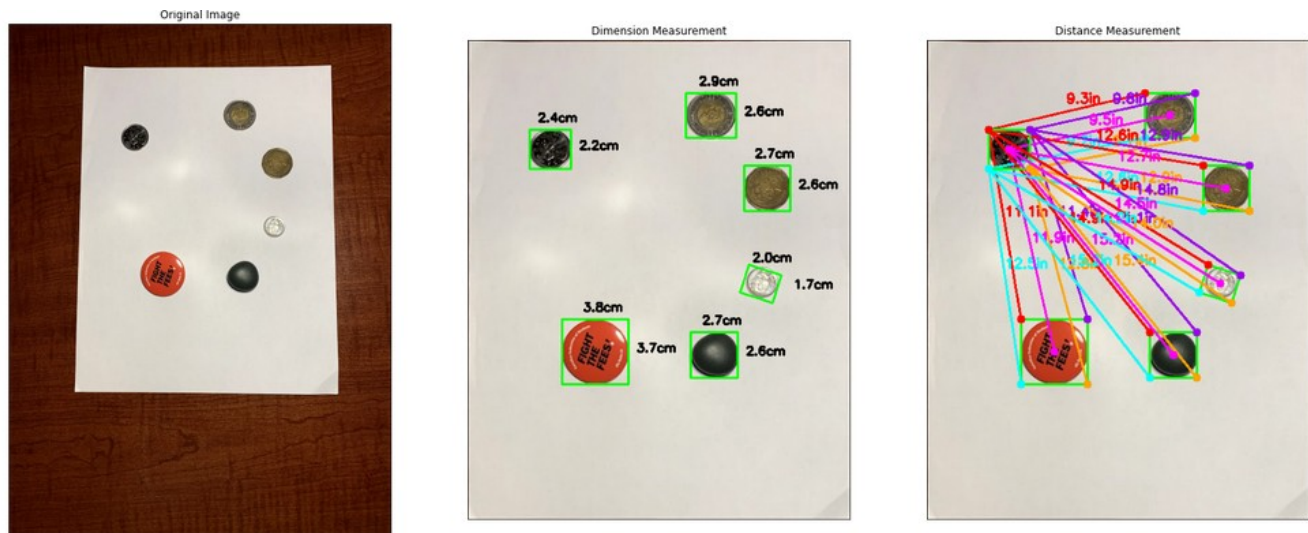

Object Measurement in Img1 with Perspective Transformation

Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2.30	2.40	2.40	97.92	-2.08
Staple Box	2.90	3.20	6.90	7.60	90.71	10.24
Pen	1.10	1.40	14.60	14.70	88.95	13.98
Lip Gel Jar	6.50	7	6.50	7.20	91.57	9.23
Rubber Eraser	6	6.10	2.30	2.70	91.77	9.53

Object Measurement in Img11 without Perspective Transformation

Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2.40	2.40	2.40	100	0
Staple Box	2.80	4.30	6.90	8.10	75.15	35.48
Pen	1.10	1.70	14.60	15.30	80.07	29.67
Lip Gel Jar	6.50	7	6.50	6.80	94.22	6.15
Rubber Eraser	2.30	3	6	6.20	86.72	16.88

Original Image

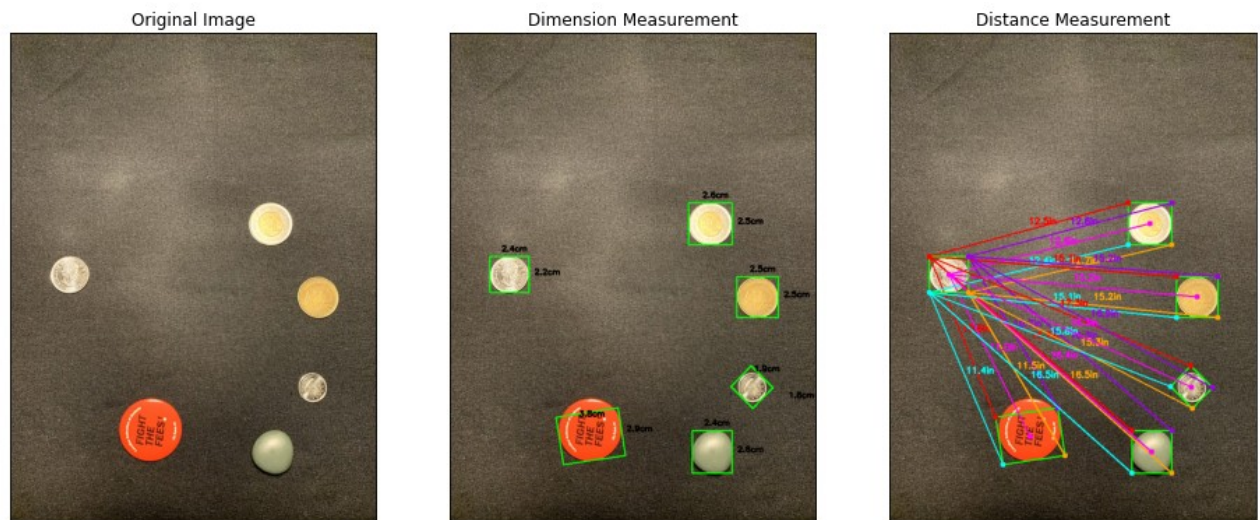Dimension Measurement

Distance Measurement

Object Measurement in Img2 with Perspective Transformation

Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2.20	2.40	2.40	95.83	-4.17
Toonie	2.80	2.60	2.80	2.90	94.70	-1.79
Dime	1.80	1.70	1.80	2	92.22	2.78
Loonie	2.70	2.60	2.70	2.70	98.15	-1.85
Badge	3.70	3.70	3.70	3.80	98.68	1.35
Stone	2.50	2.50	2.60	2.70	98.15	1.92

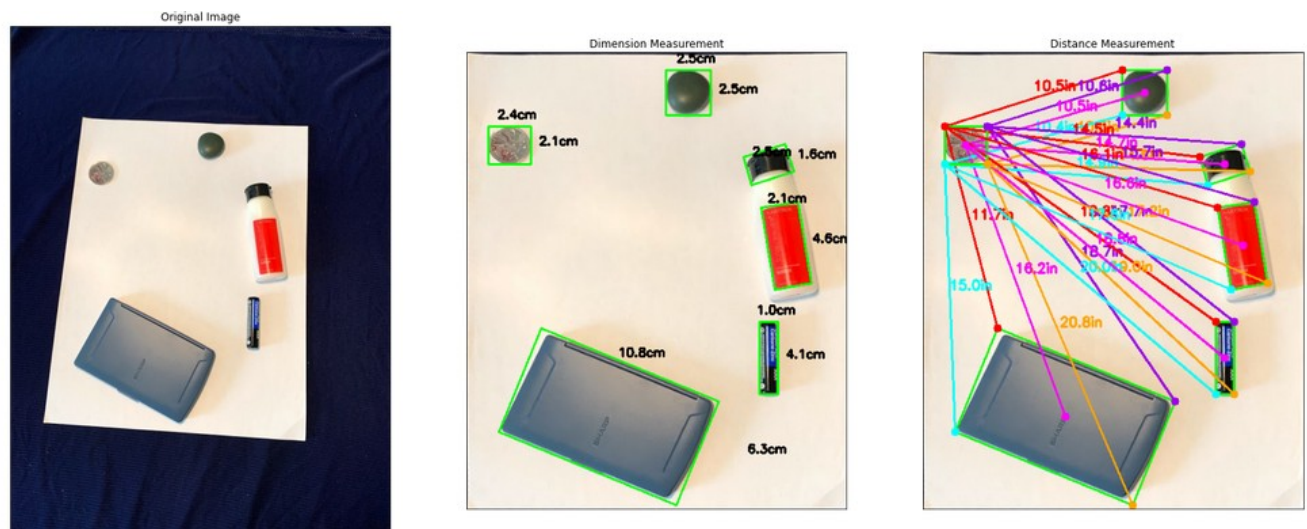| Original Image | Dimension Measurement | Distance Measurement |

Object Measurement in Img22 without Perspective Transformation

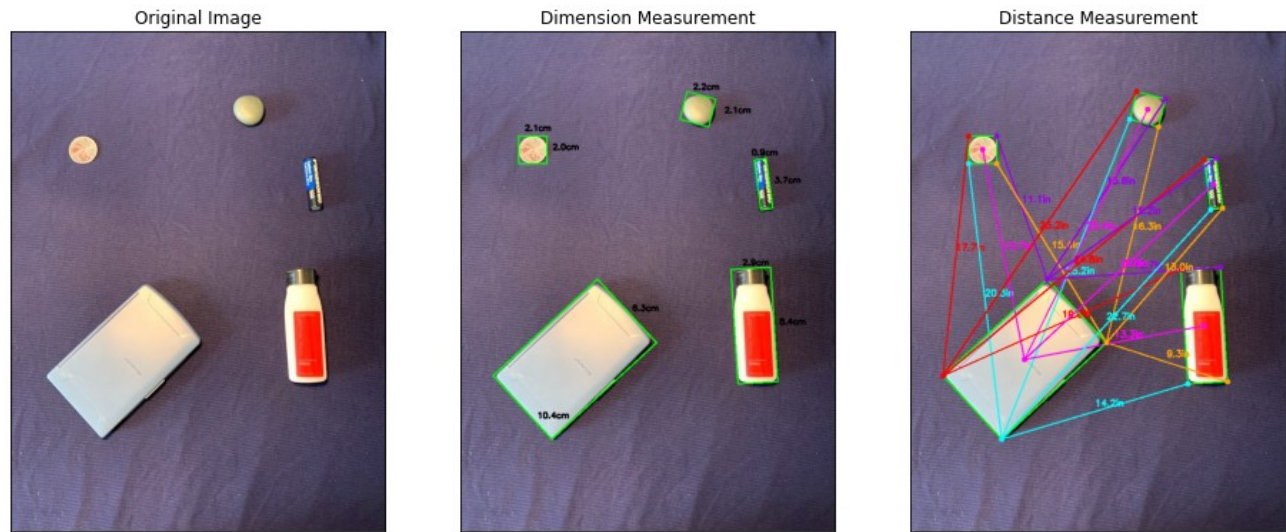| Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2.10	2.40	2.40	93.75	-6.25
Lotion Tube	8.40	6.20	2.30	2.50	82.90	-8.75
Calculator	6.30	6.30	10.50	10.80	98.61	1.43
AAA Battery	4.10	4.10	1.50	1	83.33	-16.67
Stone	2.50	2.50	2.60	2.50	98.08	-1.92

Object Measurement in Img3 with Perspective Transformation

Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2.10	2.40	2.40	93.75	-6.25
Lotion Tube	8.40	6.20	2.30	2.50	82.90	-8.75
Calculator	6.30	6.30	10.50	10.80	98.61	1.43
AAA Battery	4.10	4.10	1.50	1	83.33	-16.67
Stone	2.50	2.50	2.60	2.50	98.08	-1.92

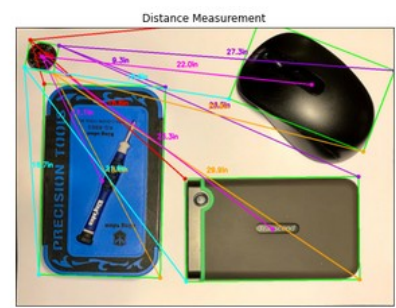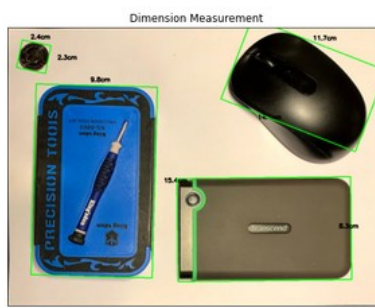| Original Image	Dimension Measurement	Distance Measurement

Object Measurement in Img32 without Perspective Transformation

Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2	2.40	2.10	85.42	-14.58
Lotion Tube	8.40	8.40	2.30	2.90	89.66	13.04
Calculator	6.30	6.30	10.50	10.40	99.52	-0.48
AAA Battery	4.10	3.70	1.50	0.90	75.12	-24.88
Stone	2.50	2.10	2.60	2.20	84.31	-15.69

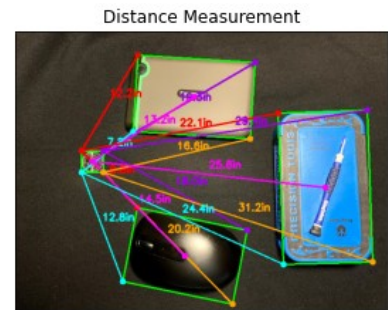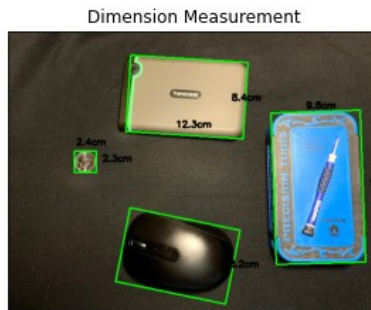Original Image   Dimension Measurement   Distance Measurement

Object Measurement in Img4 with Perspective Transformation

Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2.30	2.40	2.40	97.92	-2.08
Tool Box	14	15.40	8	9.80	86.27	16.25
Hard Disk	8.10	8.30	13	14.10	94.89	5.47
Mice	10.50	11.70	6.10	7	88.44	13.09

Original Image   Dimension Measurement   Distance Measurement

Object Measurement in Img42 without Perspective Transformation

Object Name	AH (cm)	PH (cm)	AW (cm)	PW (cm)	Avg. Accuracy (%)	Percent Error (%)
Quarter Coin	2.40	2.30	2.40	2.40	97.92	-2.08
Tool Box	14	16.60	8	9.80	82.99	20.54
Hard Disk	8.10	8.40	13	12.30	95.52	-0.84
Mice	10.50	12.30	6.10	8.20	79.88	25.78