

Experiment	System	Error in Ranging	Error in Length	Error in Width	Error in Height	Error in Orientation	% Fictitious Reflections	% Car Surface Missed
Clean Air	Our System	30 cm	47 cm	29 cm	9 cm	27°	1.5%	12.9%
	mmWave	53 cm	179 cm	89 cm	45 cm	64°	15.6%	30.5%
	L_1 Based Loss	40 cm	97 cm	76 cm	13 cm	37°	2.5%	13.1%
	Nearest Neighbor	90 cm	114 cm	70 cm	17 cm	68°	3.5%	16%
Fog	Our System	50 cm	83 cm	44 cm	11 cm	29°	2.5%	15.4%
	mmWave	67 cm	222 cm	99 cm	53 cm	72°	20.9%	31.9%
	L_1 Based Loss	60 cm	108 cm	80 cm	12 cm	38°	3.5%	13.8%
	Nearest Neighbor	121 cm	117 cm	76 cm	18 cm	45°	3.6%	22.3%
Synthesized Data	Our System	23 cm	64 cm	37 cm	8 cm	30°	1.3%	10.2%
	mmWave	29 cm	182 cm	77 cm	31 cm	62°	10.8%	19.2%
	L_1 Based Loss	20 cm	113 cm	73 cm	14 cm	47°	3.4%	9.3%
	Nearest Neighbor	81 cm	81 cm	57 cm	13 cm	64°	5.2%	17.5%