

# List of Figures

1.1	Difference of safe path with existing path . . . . .	2
2.1	Scheme of door to door system . . . . .	4
2.2	Scheme of garbage truck in door to door system . . . . .	5
2.3	Scheme of collection system indirectly . . . . .	5
2.4	Scheme of Garbage Truck . . . . .	6
2.5	point . . . . .	7
2.6	line . . . . .	8
2.7	polygon . . . . .	8
3.1	System Design . . . . .	11
3.2	flowchart . . . . .	13
4.1	Road Network . . . . .	27
4.2	Graph difference distance path using A* algorithm with population density score and without population density score . . . . .	37
4.3	Graph difference red distance path using A* algorithm with population density score and without density score . . . . .	38
4.4	Graph difference distance path using A* algorithm with population density score and by driver . . . . .	40
4.5	Graph difference red distance path using A* algorithm with population density score and by driver . . . . .	41
4.6	Graph distance route plan G 9543 AE . . . . .	42
4.7	Graph red distance route plan G 9534 AE . . . . .	43
4.8	Rute plan truck G 9534 AE . . . . .	44
4.9	Graph distance route plan G 9530 WE . . . . .	46
4.10	Graph red distance route plan G 9530 WE . . . . .	48
4.11	Rute plan truck G 9530 WE . . . . .	49
4.12	Graph distance Route plan truck G 9540 E . . . . .	50
4.13	Path from TPST arum karya . . . . .	52
4.14	Path from TPST Sejahtera mandiri . . . . .	53
4.15	Path from TPST Rapijaya . . . . .	53
5.1	Road Network . . . . .	63

5.2	Iteration 1 . . . . .	64
5.3	Iteration 2 . . . . .	65
5.4	Iteration 3 . . . . .	66
5.5	Iteration 4 . . . . .	67
5.6	Iteration 5 . . . . .	68
5.7	result . . . . .	69
5.8	Application [1] . . . . .	69
5.9	Application[2] . . . . .	69
5.10	Application[3] . . . . .	70
5.11	Simandikun street 1 . . . . .	70
5.12	Simandikun street 2 . . . . .	71
5.13	TPST sumbodro . . . . .	71
5.14	Garbage truck . . . . .	71
5.15	TPA . . . . .	72
5.16	TPA 1 . . . . .	72