

DAFTAR ISI

SKRIPSI.....	ii
HALAMAN PENGESAHAN.....	iii
HALAMAN PERNYATAAN	iii
PRAKATA.....	v
DAFTAR ISI	vi
DAFTAR GAMBAR	ix
DAFTAR TABEL.....	xi
INTISARI.....	xii
ABSTRACT.....	xiv
BAB I PENDAHULUAN	1
1.1 Latar Belakang	1
1.2 Rumusan Masalah	3
1.3 Batasan Masalah.....	4
1.4 Tujuan Penelitian.....	4
1.5 Manfaat Penelitian	4
BAB II TINJAUAN PUSTAKA	5
BAB III LANDASAN TEORI.....	11
3.1 Kendaraan Otonom	11
3.2 <i>Reinforcement Learning</i>	11
3.2.1 <i>Markov Decision Process</i>	14
3.2.2 <i>Deep Reinforcement Learning</i>	15
3.2.3 <i>Actor Critic Method</i>	16
3.3 <i>Proximal Policy Optimization</i>	16

3.4	<i>Curriculum Learning</i>	20
3.5	<i>Unity Game Engine</i>	21
3.5.1	<i>ML-Agents Toolkit</i>	22
3.5.2	<i>Raycast</i>	23
BAB IV METODOLOGI PENELITIAN		24
4.1	Studi Literatur	24
4.2	Analisis Sistem.....	25
4.3	Perancangan Sistem	25
4.3.1	Rancangan <i>Environment</i>	26
4.3.2	Rancangan <i>State</i>	30
4.3.3	Rancangan <i>Action</i>	31
4.3.4	Rancangan <i>Reward</i>	34
4.4	<i>Training</i>	34
4.5	Validasi.....	40
4.6	Evaluasi.....	42
BAB V IMPLEMENTASI		45
5.1	Alat dan Bahan.....	45
5.2	Implementasi <i>Environment</i>	45
5.3	Implementasi <i>State</i>	48
5.4	Implementasi <i>Action</i>	49
5.5	Implementasi <i>Reward</i>	51
5.6	Implementasi <i>Training</i>	53
5.7	Implementasi <i>Testing</i>	54
BAB VI HASIL DAN PEMBAHASAN.....		56
6.1	Progres <i>Training</i>	56

6.1.1	<i>Completion Rate</i>	57
6.1.2	<i>Successful Rate</i>	59
6.2	<i>Testing</i>	62
6.2.1	Analisis Beban Komputasi.....	65
BAB VII KESIMPULAN DAN SARAN		67
7.1	Kesimpulan	67
7.2	Saran.....	68
DAFTAR PUSTAKA		69