

DAFTAR ISI

HALAMAN PENGESAHAN PEMBIMBING	iii
HALAMAN PENGESAHAN PEMBIMBING	iv
HALAMAN PENGESAHAN PEMBIMBING	v
HALAMAN PENGESAHAN PENGUJI.....	vi
SURAT PERNYATAAN	vii
KARYA ASLI TUGAS AKHIR	vii
PERNYATAAN BEBAS PLAGIASI	viii
ABSTRAK	ix
ABSTRACT	x
KATA PENGANTAR	xi
DAFTAR ISI.....	xii
DAFTAR TABEL	xv
DAFTAR GAMBAR.....	xvi
DAFTAR LAMPIRAN.....	xvii
BAB I PENDAHULUAN	1
1.1 Latar Belakang Masalah.....	1
1.2 Rumusan Masalah	3
1.3 Batasan Masalah.....	3
1.4 Tujuan Penelitian.....	4
1.5 Manfaat Penelitian	4
1.6 Tahapan Penelitian	4
1.7 Sistematika Penulisan.....	5
BAB II	6
TINJAUAN LITERATUR.....	6
2.1 Wajah.....	6
2.2 <i>Deep Face Recognition</i>	6
2.2.1 Multi-Task Cascaded Convolutional Networks	7
2.2.2 InsightFace	8
2.3 <i>Numerical Finite Difference</i>	10
2.3.1 <i>Forward Difference</i>	11
2.3.2 <i>Backward Difference</i>	11
2.3.3 <i>Central Difference</i>	11
2.4 <i>Adversarial Attack</i>	14
2.4.1 <i>Gradient Based Attack</i>	15
2.4.2 Teknik <i>Dodging</i>	16
2.4.3 Teknik <i>Impersonation</i>	16

2.5	Metode Optimasi	17
2.5.1	ADAM Optimizer.....	17
2.5.2	Natural Evolution Strategies (NES).....	18
2.6	Metode Evaluasi.....	19
2.6.1	Mean Squared Error.....	19
2.6.2	Structure Similarity Index Measure.....	20
2.6.3	Peak Signal-to-Noise Ratio	20
2.6.4	Cosine Similarity	21
2.6.5	Success Rate	22
2.7	State Of the Art	22
BAB III		27
METODOLOGI PENELITIAN		27
3.1	Metodologi Penelitian	27
3.2	Analisis Kebutuhan	28
3.3	Akuisisi Data	29
3.3.1	Data Preprocessing	30
3.4	Persiapan Model.....	34
3.5	Pengembangan Fast Numerical Gradient Sign Method.....	34
3.6	Implementasi	39
3.6.1	Ekstraksi Wajah	40
3.6.2	Implementasi Metode Impersonation Fast Numerical Gradient Sign Method.....	40
3.6.3	Implementasi Metode Fast Numerical Gradient Sign Method Teknik Dodging.....	43
3.6.4	Implementasi Serangan ke Impersonate_set dan dodging_set.....	45
3.7	Rencana Pengujian dan Evaluasi	48
BAB IV		50
HASIL DAN PEMBAHASAN		50
4.1	Hasil Penelitian	50
4.1.1	Dodging Fast Numerical Gradient Sign Method	50
4.1.2	Impersonation Fast Numerical Gradient Sign Method.....	53
4.2	Analisis Hasil Penelitian	55
4.2.1	Fast Numerical Gradient Sign Method	56
4.2.2	Fast Numerical Gradient Sign Method-ADAM Optimizer	56
4.3	Pembahasan.....	59
BAB V		62
KESIMPULAN		62
5.1	Kesimpulan	62

5.2	Saran.....	63
DAFTAR PUSTAKA		64
LAMPIRAN		67