



## DAFTAR ISI

HALAMAN PENGESAHAN .....	ii
LEMBAR DEWAN PENGUJI .....	iii
PERNYATAAN BEBAS PLAGIASI .....	iv
HALAMAN PERSEMPAHAN .....	v
KATA PENGANTAR .....	vii
DAFTAR ISI .....	viii
DAFTAR TABEL .....	xii
DAFTAR GAMBAR .....	xv
DAFTAR SINGKATAN .....	xx
INTISARI .....	xxi
ABSTRACT .....	xxii
BAB I Pendahuluan .....	1
1.1 Latar Belakang .....	1
1.2 Rumusan Masalah .....	4
1.3 Tujuan Penelitian .....	5
1.4 Batasan Penelitian .....	5
1.5 Manfaat Penelitian .....	6
1.6 Sistematika Penulisan .....	6
BAB II Tinjauan Pustaka dan Dasar Teori .....	8
2.1 Tinjauan Pustaka .....	8
2.2 Dasar Teori .....	14
2.2.1 SIMASTER UGM .....	14
2.2.2 <i>Eye Tracking</i> .....	16
2.2.3 GP3 <i>Eye-Tracking</i> .....	18
2.2.4 <i>Eye Tracking Metric</i> .....	19
2.2.5 <i>Visual Saliency</i> .....	19
2.2.6 <i>User Experience</i> .....	20
2.2.7 <i>User Research</i> .....	20
2.2.8 <i>User Centered Design</i> .....	20
2.2.8.1 Analisis Perbandingan Metode .....	21
2.2.9 <i>The Elements of User Experience</i> .....	23
2.2.10 <i>Usability Evaluation</i> .....	25
2.2.11 <i>Usability Testing</i> .....	26
2.2.12 <i>User Experience (UX) Metric</i> .....	26
2.2.12.1 <i>Card Sorting</i> .....	26
2.2.12.2 <i>A/B Testing</i> .....	27



2.2.12.3 <i>Task Completion Rate (TCR)</i> .....	27
2.2.12.4 <i>Time on Task</i> .....	28
2.2.12.5 <i>User Experience Questionnaire (UEQ)</i> .....	28
2.2.13 <i>Two Way ANOVA</i> .....	28
BAB III Metode Penelitian.....	30
3.1 Alat dan Bahan .....	30
3.1.1 Kuesioner .....	30
3.1.2 <i>Usability Testing</i> dengan <i>Think Aloud Evaluation</i> .....	31
3.1.3 <i>Card Sorting</i> .....	32
3.1.4 <i>A/B Testing</i> .....	33
3.1.5 Pengujian <i>Redesign SIMASTER UGM Mobile Application</i> de- ngan <i>Eye Tracking</i> dan <i>UEQ</i> .....	34
3.2 Metode yang Digunakan.....	36
3.2.1 <i>User Research</i> .....	37
3.2.2 <i>Usability Evaluation</i> .....	39
3.2.3 Pengolahan Data .....	41
3.3 Alur Tugas Akhir .....	42
3.4 Prosedur Penelitian .....	54
3.4.1 <i>Self-Reported Questionnaire</i> : Survei .....	54
3.4.2 <i>Usability Testing</i> .....	57
3.4.3 <i>Card Sorting</i> .....	60
3.4.4 <i>A/B Testing</i> .....	63
3.4.5 <i>Eye tracking</i> dan <i>UEQ</i> .....	67
BAB IV Hasil dan Pembahasan.....	78
4.1 <i>The Elements of User Experience</i> .....	78
4.1.1 <i>Strategy</i> .....	78
4.1.1.1 Tujuan .....	78
4.1.1.2 Kebutuhan .....	78
4.1.2 <i>Scope</i> .....	109
4.1.2.1 Spesifikasi Fungsi.....	109
4.1.2.2 Persyaratan Konten .....	110
4.1.3 <i>Structure</i> .....	111
4.1.3.1 <i>Interaction Design</i> .....	111
4.1.3.2 <i>Architecture Information</i> .....	112
4.1.4 <i>Skeleton</i> .....	119
4.1.5 <i>Surface</i> .....	120
4.2 Pengujian .....	130
4.2.1 <i>A/B Testing AI Visual Saliency</i> .....	130
4.2.2 <i>A/B Testing Human Principals</i> .....	133



4.2.3 Pengujian <i>Eye Tracking</i> .....	141
4.2.3.1 <i>Task Completion Rate (TCR)</i> .....	143
4.2.3.2 <i>Time to First Fixation on Target</i> .....	146
4.2.3.3 <i>Analisis Area of Interest (AOI) Heatmaps Fixation</i> .....	157
4.2.3.4 <i>“Time From First Fixation on Target to Target Selection”</i> .....	160
4.2.3.5 <i>Analisis Area of Interest (AOI) Heatmaps Duration</i> .....	171
4.2.4 Analisis Hasil <i>Pengguna Experience Questionnaire (UEQ)</i> .....	173
4.2.4.1 UEQ Pria <i>Existing Design</i> .....	173
4.2.4.2 UEQ Wanita <i>Existing Design</i> .....	173
4.2.4.3 Komparasi Hasil UEQ Pria dan Wanita <i>Existing Design</i> .....	174
4.2.4.4 UEQ Pria <i>Redesign</i> .....	175
4.2.4.5 UEQ Wanita <i>Redesign</i> .....	176
4.2.4.6 Komparasi UEQ Pria dan Wanita <i>Redesign</i> .....	177
4.2.4.7 UEQ <i>Existing Design</i> .....	178
4.2.4.8 UEQ <i>Redesign</i> .....	179
4.2.4.9 Komparasi <i>Existing Design</i> dan <i>Redesign</i> .....	180
4.3 Wilcoxon Signed Rank Test Matched Pairs .....	181
4.3.1 Uji Normalitas.....	181
4.3.2 Wilcoxon Signed Rank Test Matched Pairs <i>Existing Design</i> dan <i>Redesign</i> .....	182
4.3.3 Wilcoxon Signed Rank Test Matched Pairs <i>Existing Design</i> dan <i>Redesign</i> pada Pria dan Wanita .....	184
4.4 Retrospective Think Aloud (RTA) .....	186
4.5 Keterbatasan Penelitian .....	187
BAB V Kesimpulan dan Saran .....	188
5.1 Kesimpulan .....	188
5.2 Saran .....	190
DAFTAR PUSTAKA .....	191
LAMPIRAN .....	L-1
L.1 Antarmuka <i>Existing Design</i> .....	L-1
L.2 Hasil Google Play dan Apple Store .....	L-2
L.3 Survei .....	L-4
L.4 Open Card Sorting .....	L-20
L.5 User Flow .....	L-21
L.6 Skeleton .....	L-23
L.7 Hasil Surface .....	L-26
L.8 A/B Testing .....	L-34
L.9 Informed Consent .....	L-41



L.10 Ethical Clearance .....	L-45
L.11 Data Hasil <i>Eye Tracking</i> .....	L-46
L.12 Uji Normalitas Data UEQ .....	L-54
L.13 Data Hasil <i>User Experience Questionnaire</i> (UEQ) .....	L-57
L.14 Hasil <i>Retrospective Think Aloud</i> (RTA) .....	L-61