

DAFTAR GAMBAR

Gambar 2. 1	<i>Schematic Single Line</i> Gardu Traksi KRL	17
Gambar 2. 2	<i>Single Line</i> Gardu Traksi KRL	18
Gambar 2. 3	Jaringan <i>Catenary</i> dari Sisi Samping	19
Gambar 2. 4	Kawat Pada Jaringan LAA	19
Gambar 2. 5	<i>Electric Spark on Pantograph</i>	22
Gambar 2. 6	Kondisi <i>Arc flash and Blash</i>	22
Gambar 3. 1	<i>Flowchart</i> Keseluruhan Sistem.....	29
Gambar 3. 2	<i>Flowchart</i> Subsystem <i>Training</i>	31
Gambar 3. 3	Diagram Blok Keseluruhan Sistem.....	34
Gambar 3. 4	Diagram Blok Sub-Sistem	35
Gambar 3. 5	Arsitektur Perangkat Keras.....	40
Gambar 3. 6	Desain Sistem.....	41
Gambar 3. 7	Desain <i>Prototype</i> Generator Elektroda.....	42
Gambar 4. 1	Tampilan Flir One Gen 3.....	44
Gambar 4. 2	Grafik Suhu antara Flir One dan Thermogun	46
Gambar 4. 3	<i>Capture</i> Termal Kamera .jpg	47
Gambar 4. 4	<i>Capture</i> Kamera Z Cam E2	48
Gambar 4. 5	<i>Database</i> Deteksi Busur Listrik.....	49
Gambar 4. 6	Grafik Hasil VGG16 <i>Training</i>	51
Gambar 4. 7	VGG16 <i>Training</i>	51
Gambar 4. 8	Arsitektur ResNet50.....	53
Gambar 4. 9	Arsitektur VGG16-Alt.....	55
Gambar 4. 10	<i>Validation Accuracy</i> Ketiga Model.....	55
Gambar 4. 11	Hasil <i>Test accuracy Ensemble</i>	56
Gambar 4. 12	Performa <i>Ensemble</i> Model.....	57
Gambar 4. 13	<i>Final Ensemble Confusion Matrix</i>	57
Gambar 4. 14	Hasil dan Prediksi dari Deteksi <i>Arcing</i>	59
Gambar 4. 15	<i>Wire Contour Detection</i>	61
Gambar 4. 16	<i>Metrics Across Folds</i>	70
Gambar 4. 17	Rata-rata <i>Cross Validation</i>	70
Gambar 4. 18	<i>Cross Validation Accuracy Fold</i>	71

Gambar 4. 19	Grafik Model Accuracy	72
Gambar 4. 20	Model Loss Overtime	73
Gambar 4. 21	Grafik Precision and Recall	73
Gambar 4. 22	Final Test Metrics	74
Gambar 4. 23	Confusion Matrix Kawat Trolley	75
Gambar 4. 24	Grafik Ensemble Model ResNet50 Trolley Wire	77
Gambar 4. 25	Model Predictions Visualization.....	78
Gambar 4. 26	Integrasi Keseluruhan Hardware	80