

Article

Automatic and Reliable Leaf Disease Detection using Deep Learning Techniques

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Table S1. Summary of the tomato leaf disease classification performance using non-segmented original leaf images.

Classification scheme	Models	Result with 95% CI				
		Overall	Weighted			
		Accuracy	Precision	Sensitivity	F1-score	Specificity
2 Class	EfficientNet-b0	98.4 ± 0.18	96.2 ± 0.28	94.8 ± 0.32	95.2 ± 0.31	98.6 ± 0.17
	EfficientNet-b4	98.42 ± 0.18	96.32 ± 0.27	95.21 ± 0.31	95.4 ± 0.3	98.66 ± 0.17
	EfficientNet-b7	98.9 ± 0.15	96.56 ± 0.27	95.4 ± 0.3	96.12 ± 0.28	98.85 ± 0.16
6 Class	EfficientNet-b0	96.86 ± 0.25	96.84 ± 0.25	96.84 ± 0.25	96.84 ± 0.25	99.18 ± 0.13
	EfficientNet-b4	96.74 ± 0.26	96.76 ± 0.26	96.74 ± 0.26	96.74 ± 0.26	99.25 ± 0.13
	EfficientNet-b7	97.99 ± 0.2	97.99 ± 0.2	97.99 ± 0.2	97.98 ± 0.2	99.54 ± 0.1
10 Class	EfficientNet-b0	96.82 ± 0.26	96.83 ± 0.25	96.82 ± 0.26	96.82 ± 0.26	99.25 ± 0.13
	EfficientNet-b4	96.92 ± 0.25	96.93 ± 0.25	96.92 ± 0.25	96.93 ± 0.25	99.3 ± 0.12
	EfficientNet-b7	97.44 ± 0.23	97.45 ± 0.23	97.44 ± 0.23	97.44 ± 0.23	99.35 ± 0.12

Score-CAM Heat Map

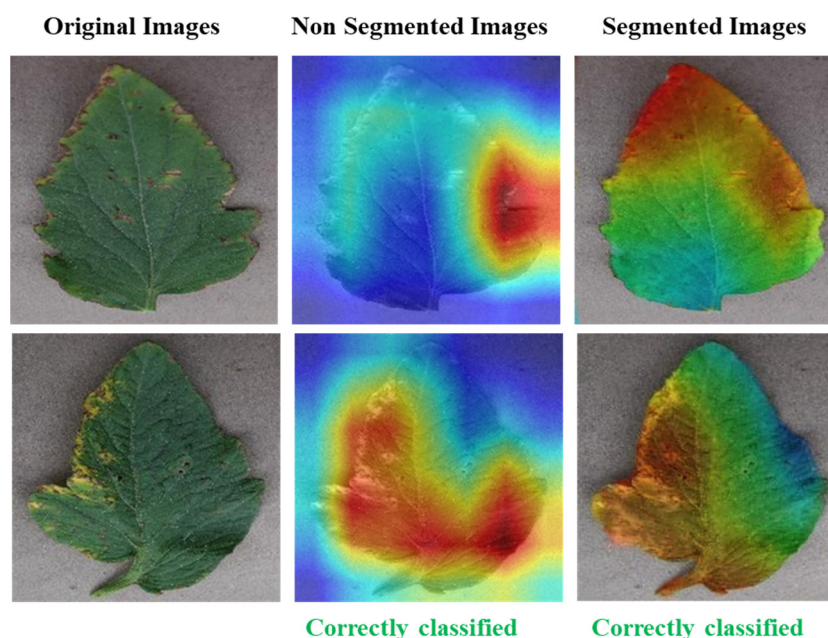


Figure S1. Score-CAM visualization to confirm how segmentation has helped in classification even incorrectly classified images.