

Table 3: Evaluation of Filtered Data Augmentation on Cassava Leaf Disease Dataset. Baseline: original samples; None: unfiltered augmentation (mean of 100% tolerance); Wass, TV, MMD: filtered data at 20%, 60%, 80% tolerance.

Size	Model	Acc	Prec	Rec	F1	Size	Model	Acc	Prec	Rec	F1
125	Baseline	0.266	0.271	0.266	0.246	375	Baseline	0.398	0.399	0.398	0.390
	None	0.316	0.359	0.316	0.290		None	0.430	0.420	0.430	0.413
	Wass-20	0.318	0.353	0.318	0.273		Wass-20	0.434	0.429	0.434	0.424
	Wass-60	0.352	0.391	0.352	0.331		Wass-60	0.432	0.443	0.432	0.419
	Wass-80	0.364	0.397	0.364	0.353		Wass-80	0.430	0.415	0.430	0.402
	TV-20	0.288	0.312	0.288	0.249		TV-20	0.472	0.464	0.472	0.460
	TV-60	0.332	0.365	0.332	0.319		TV-60	0.426	0.419	0.426	0.414
	TV-80	0.362	0.404	0.362	0.348		TV-80	0.458	0.451	0.458	0.445
	MMD-20	0.334	0.392	0.334	0.316		MMD-20	0.434	0.423	0.434	0.415
	MMD-60	0.338	0.355	0.338	0.327		MMD-60	0.420	0.413	0.420	0.399
	MMD-80	0.372	0.392	0.372	0.362		MMD-80	0.436	0.428	0.436	0.420
250	Baseline	0.350	0.351	0.350	0.337	500	Baseline	0.414	0.415	0.414	0.411
	None	0.387	0.398	0.387	0.367		None	0.465	0.465	0.465	0.460
	Wass-20	0.396	0.392	0.396	0.384		Wass-20	0.476	0.477	0.476	0.472
	Wass-60	0.384	0.396	0.384	0.364		Wass-60	0.452	0.461	0.452	0.436
	Wass-80	0.388	0.396	0.388	0.381		Wass-80	0.440	0.439	0.440	0.428
	TV-20	0.418	0.422	0.418	0.411		TV-20	0.476	0.480	0.476	0.474
	TV-60	0.396	0.406	0.396	0.381		TV-60	0.462	0.460	0.462	0.459
	TV-80	0.442	0.442	0.442	0.433		TV-80	0.466	0.464	0.466	0.462
	MMD-20	0.422	0.439	0.422	0.406		MMD-20	0.452	0.452	0.452	0.446
	MMD-60	0.422	0.432	0.422	0.415		MMD-60	0.474	0.475	0.474	0.465
	MMD-80	0.418	0.441	0.418	0.398		MMD-80	0.474	0.471	0.474	0.468

(Response 2,4 to 9i7B, Response W8 to ndn7,Response 6 to FqDa,Response 9 to aTs1) Performance metrics (%) on a 5-class cassava leaf disease dataset [1] with varying training sizes (Size). For each original image, 10 images are generated using Stable Diffusion XL, with **strength=0.2** (5 images) and **strength=0.6** (5 images). Models use pretrained EfficientNet-B0 (ImageNet weights), with feature extraction layers frozen and the classifier trained using Adam optimizer (learning rate 1e-4, batch size 32, dropout 0.5). Results show that filtering is effective, with small differences among metrics.

[1] *Cassava Leaf Disease Classification Dataset*