

Supplementary Table 1: Model Hyperparameters and library setups used during the dataset benchmarking.

Section	Parameter	Value	Library
Model	Architecture	U-net	Segmentation-models-pytorch
	Encoder	ResNet34	
Augmentation	RandomChannelDrop	p=0.5	Kornia
	HorizontalFlip	p=0.5	
	VerticalFlip	p=0.5	
	RandomRotation	p=0.5, degree=90	
Data Normalization	Quantile 10% (RGBIE)	15, 26, 24, 75, 0	N/A
	Quantile 90% (RGBIE)	162, 158, 148, 239, 186	
Class weights	Background	0.1	N/A
	Bark beetle	0.25	
	Clear-cut	0.25	
	Windthrow	0.4	
Training	Epochs	100	Pytorch,pytorch-lightning
	Early stopping patience	50	
	Batch size	32	
Optimizer config	Deterministic mode	warn	Pytorch,pytorch-lightning
	Learning rate	0.0001	
	Factor	0.1	
LR scheduler	Mode	minimum	Pytorch,pytorch-lightning
	Value to monitor	validation loss	
Computation	Patience	3	Pytorch,pytorch-lightning
	Seed	2024	
	No. GPUs	8	

Version
0.3.3
0.7.3
N/A
N/A
2.4.0,2.1.1
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2.4.0,2.1.1
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