

Model Report: 3D CNN Patch-Level

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Script: /home/mmann1123/Documents/github/South_Africa_Crop_Comp/deep_learn/src/Deep Learning/Patch Level/3D

Data Split:

train_count: 21741
test_count: 5355
random_seed: 42
split_method: field-based (patch-level)

Metrics (test set):

Accuracy: 0.7548
Cohen Kappa: 0.6789
F1 Weighted: 0.7484
F1 Macro: 0.6994

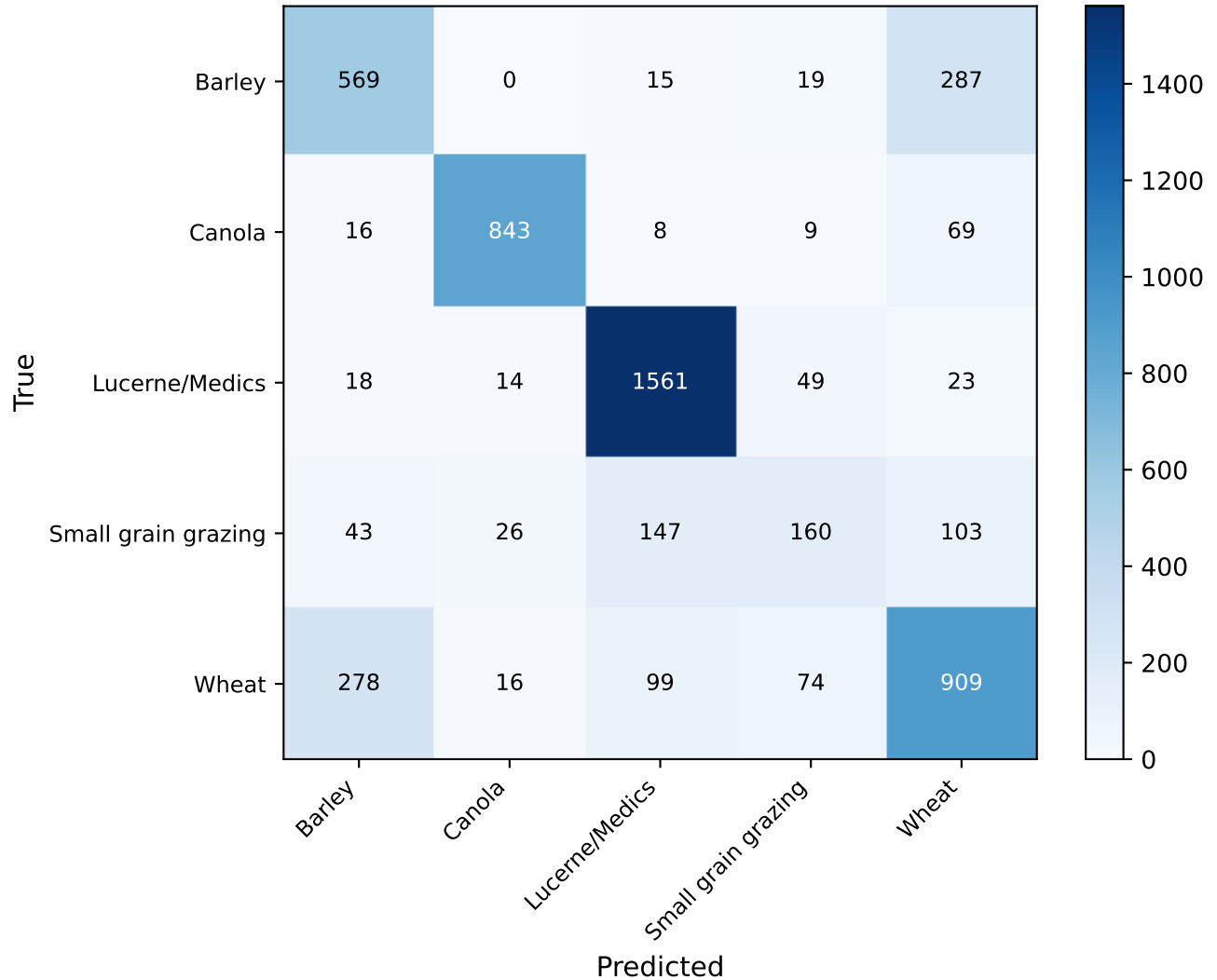
Hyperparameters:

target_size: [128, 128]
batch_size: 8
epochs: 20
optimizer: Adam(lr=1e-4)
loss: sparse_categorical_crossentropy
conv3d_filters: [32, 64, 128]
bands: ['SA_B11', 'SA_B12', 'SA_B2', 'SA_B6', 'SA_EVI', 'SA_hue']
time_steps: 10

Per-Class Metrics

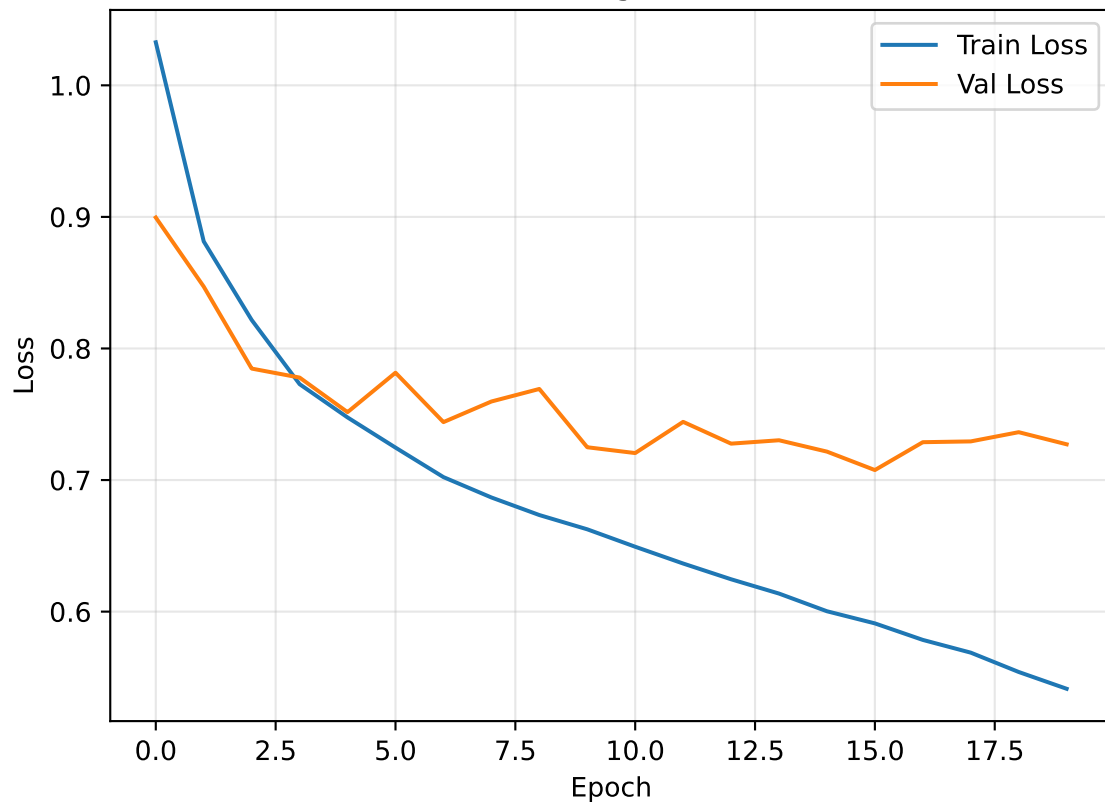
Class	Precision	Recall	F1-Score	Support
Barley	0.616	0.639	0.627	890
Canola	0.938	0.892	0.914	945
Lucerne/Medics	0.853	0.938	0.893	1665
Small grain grazing	0.514	0.334	0.405	479
Wheat	0.653	0.661	0.657	1376

Confusion Matrix



Training Curves

Training Loss



Training Accuracy

