Training Report: LightAttention beb27502-bd1c-443b-bc3d-81a8f93897b0

Best Epoch Performance Metrics

```
Summary of Metrics:
- Samples: 1678
- Loss: 0.522
- Accuracy: 80.082%
- Precision (PPV): 82.514%
- Recall (Sensitivity): 80.082%
- Specificity (TNR): 99.380%
- F1-Score: 80.011%
- ROC AUC: 95.124%
- PR AUC: 78.962%
- Performance: 83.499%
- Weighted: True
```
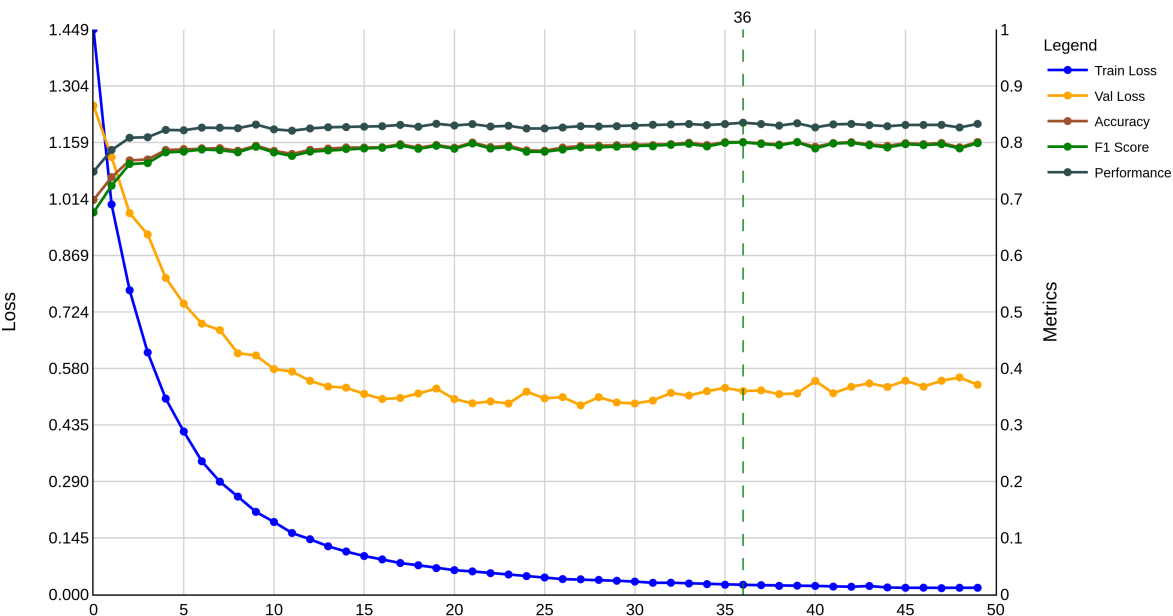
Model Configuration

```
- in_channels: 1024
- in_seq_len: 1023
- out_channels: 10
- kernel_size: 9
- conv_dropout_rate: 0.25
- hidden_layers: HiddenLayers(kind=Type.EXACT, value=[32])
- ffn_dropout_rate: 0.25
```

Memory Size:

```
72.260 MB
```
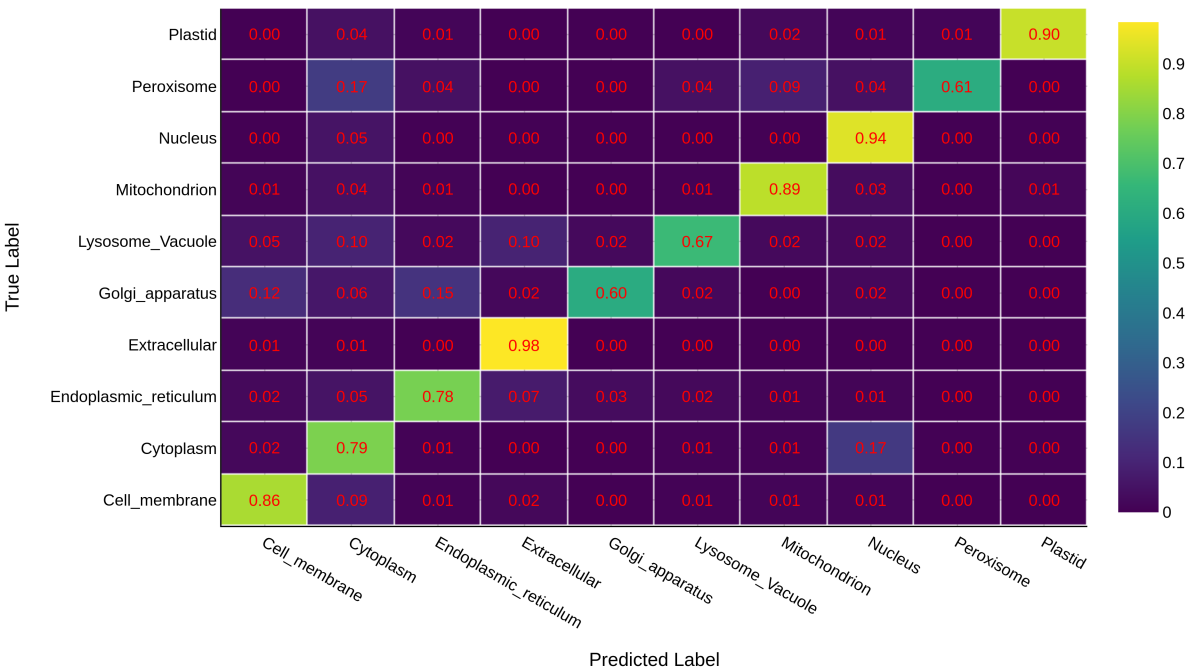
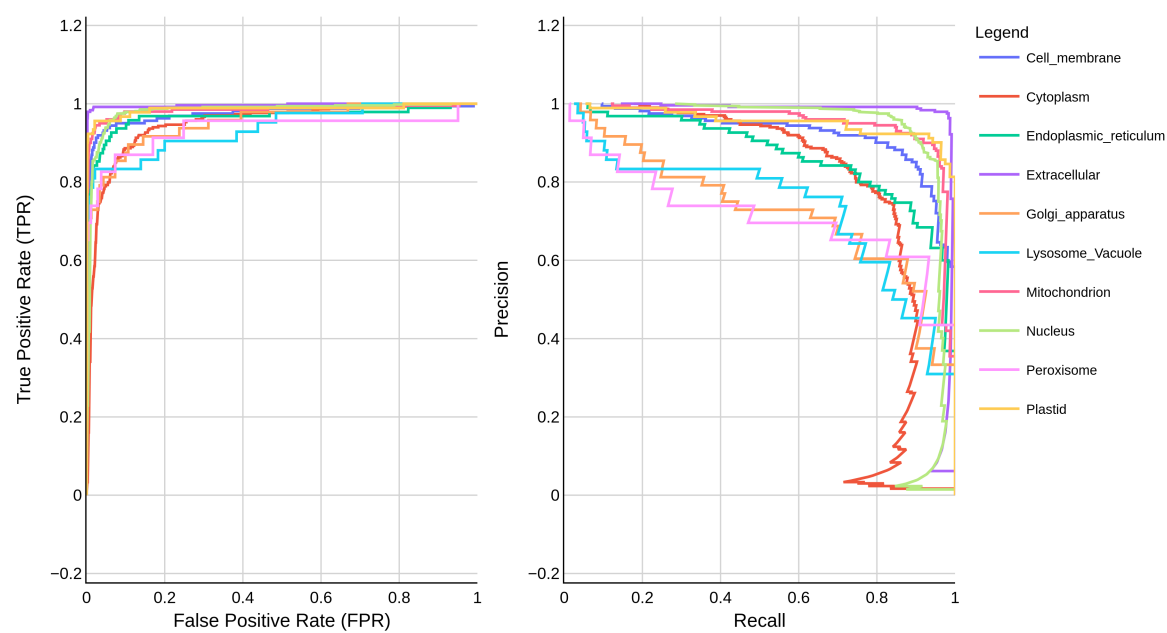# Figures & Visualizations

TrainingLoss & TrainingPerformance (epoch: 49) | LightAttention
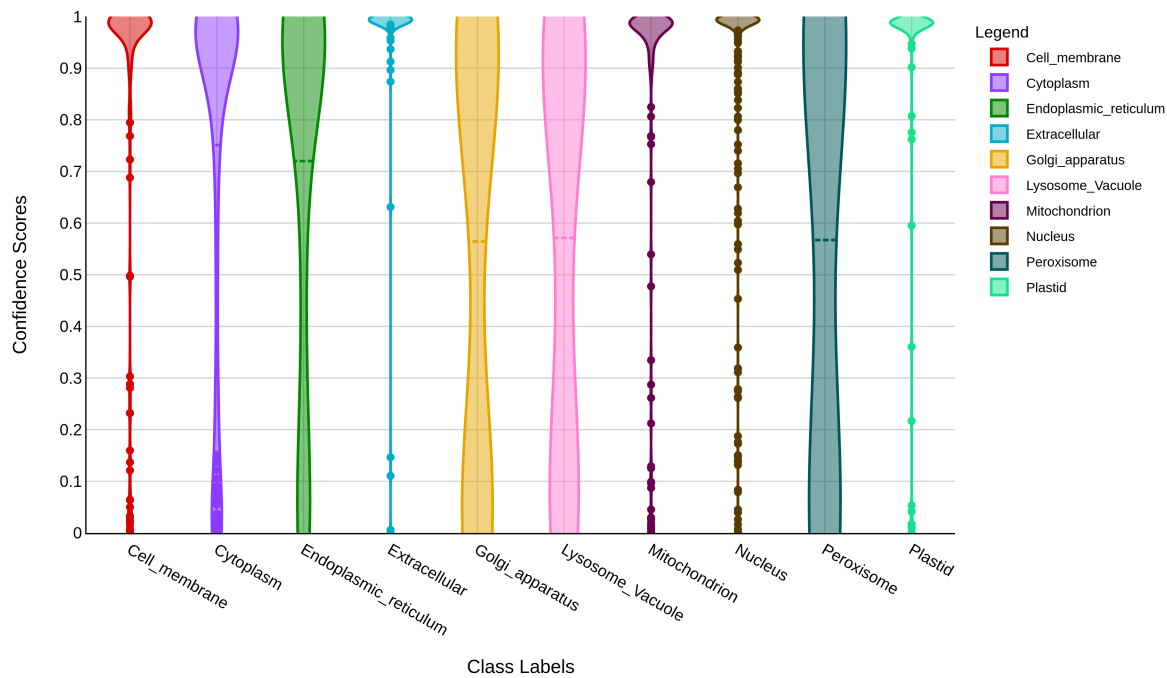

Confusion Matrix (LightAttention)

MultiFigure: ROCCurve | PRCurve

Prediction Confidence Distribution (LightAttention)

Final Evaluation Report: LightAttention (beb27502-bd1c-443b-bc3d-81a8f93897b0)

Test Set Performance

```
Summary of Metrics:
- Samples: 490
- Loss: 1.549
- Accuracy: 64.490%
- Precision (PPV): 69.742%
- Recall (Sensitivity): 58.210%
- Specificity (TNR): 95.545%
- F1-Score: 60.858%
- ROC AUC: 88.812%
- PR AUC: 63.846%
- Performance: 68.857%
- Weighted: False
```

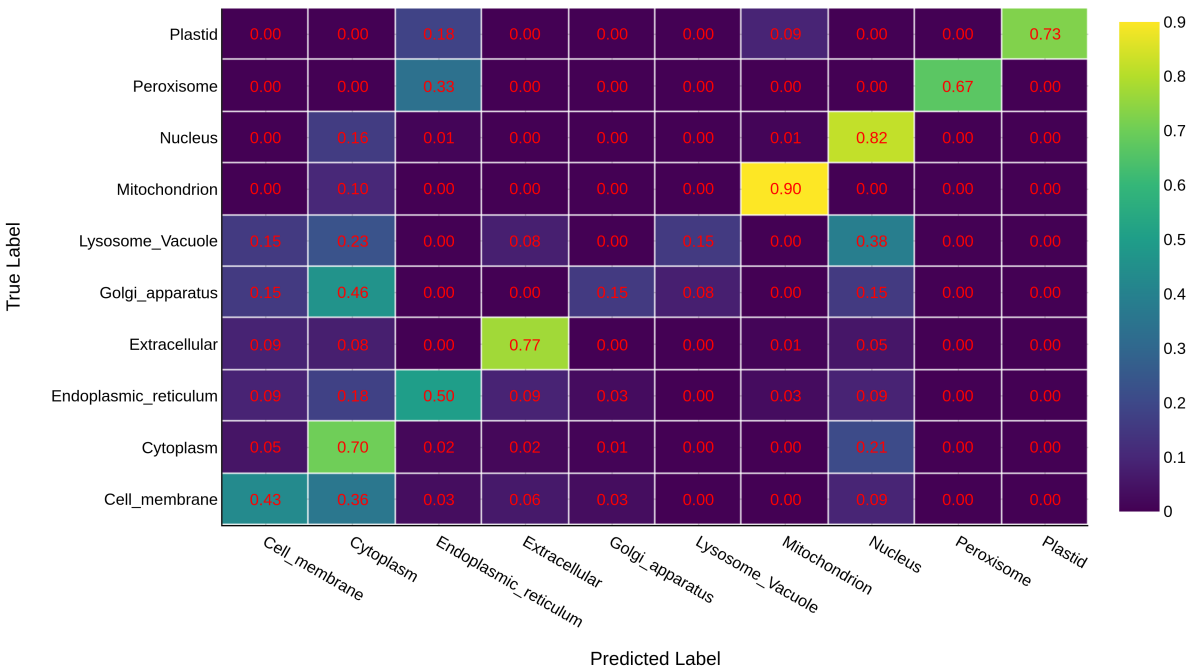## Test Set Performance (Sampled Statistics)
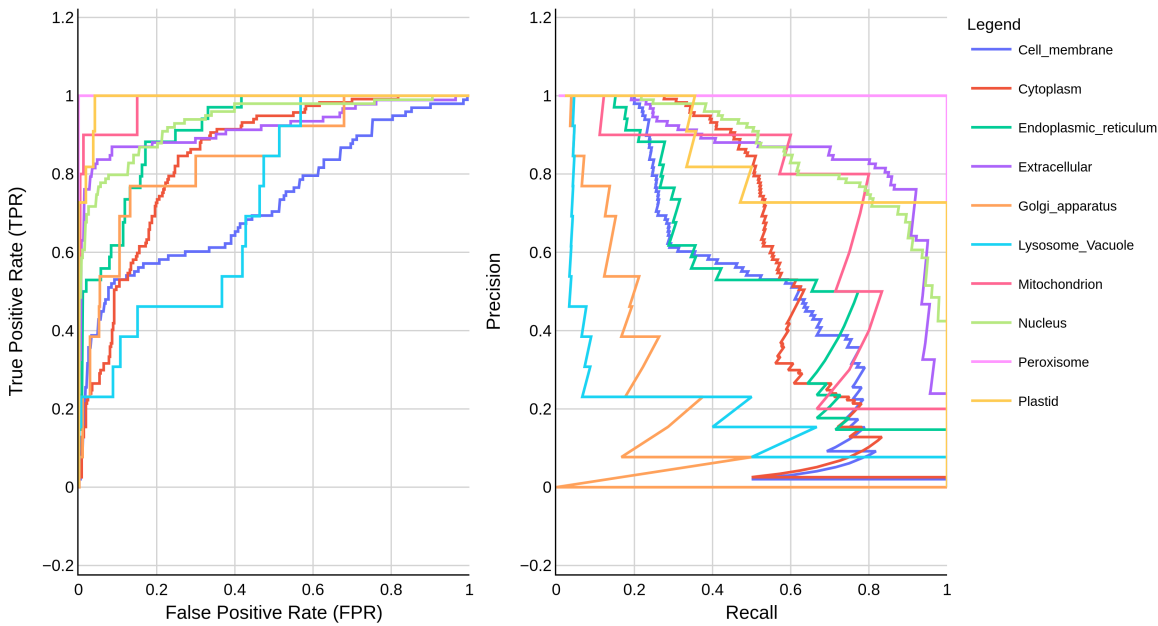
```
MetricsSampled Summary:
mean metric 95% confidence interval
Accuracy: 64.41 [64.30 - 64.53]
Sensitivity: 57.73 [57.52 - 57.95]
Specificity: 95.54 [95.52 - 95.55]
F1-Score: 59.20 [58.98 - 59.42]
```

Figures & Visualizations

Confusion Matrix (LightAttention)

True Label	Cell_membrane	Cytoplasm	Endoplasmic_reticulum	Extracellular	Golgi_apparatus	Lysosome_Vacuole	Mitochondrion	Nucleus	Peroxisome	Plastid
Plastid	0.00	0.00	0.18	0.00	0.00	0.00	0.09	0.00	0.00	0.73
Peroxisome	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.67	0.00
Nucleus	0.00	0.16	0.01	0.00	0.00	0.00	0.01	0.82	0.00	0.00
Mitochondrion	0.00	0.10	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.00
Lysosome_Vacuole	0.15	0.23	0.00	0.08	0.00	0.15	0.00	0.38	0.00	0.00
Golgi_apparatus	0.15	0.46	0.00	0.00	0.15	0.08	0.00	0.15	0.00	0.00
Extracellular	0.09	0.08	0.00	0.77	0.00	0.00	0.01	0.05	0.00	0.00
Endoplasmic_reticulum	0.09	0.16	0.50	0.09	0.03	0.00	0.03	0.09	0.00	0.00
Cytoplasm	0.05	0.70	0.02	0.02	0.01	0.00	0.00	0.21	0.00	0.00
Cell_membrane	0.43	0.36	0.03	0.06	0.03	0.00	0.00	0.09	0.00	0.00

Predicted Label

MultiFigure: ROCCurve | PRCurve

Legend
- Cell_membrane
- Cytoplasm
- Endoplasmic_reticulum
- Extracellular
- Golgi_apparatus
- Lysosome_Vacuole
- Mitochondrion
- Nucleus
- Peroxisome
- Plastid

Prediction Confidence Distribution (LightAttention)