■ Liver Fibrosis Staging

Training Completion Report

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■ Model Summary

Parameter	Value
Model Architecture	Vision Transformer (ViT-B/16)
Pre-trained Weights	ImageNet-1K
Input Size	224 × 224 pixels
Number of Classes	5 (F0, F1, F2, F3, F4)
Total Parameters	~86 Million

■■ Training Configuration

Setting	Value
Device	NVIDIA GeForce RTX 3050 (CUDA)
Total Epochs	20
Batch Size	8
Learning Rate	0.0001
Optimizer	AdamW (weight_decay=0.01)
Scheduler	CosineAnnealingLR
Loss Function	CrossEntropyLoss (label_smoothing=0.1)
Early Stopping	Patience = 5

■ Dataset Information

Metric	Value
Total Samples	6,323 images
Training Samples	5,058 (80%)
Validation Samples	1,265 (20%)
Class F0	2,114 images
Class F1	861 images
Class F2	793 images
Class F3	857 images
Class F4	1,698 images

■ Training Results

Epoch	Train Loss	Train Acc	Val Loss	Val Acc	Status
1	1.1734	53.58%	1.1760	51.94%	✓
5	0.8948	70.84%	0.8945	70.67%	✓
10	0.7055	80.24%	0.7398	79.84%	✓
12	0.6428	86.24%	0.6263	87.11%	✓
15	0.5335	93.12%	0.5330	92.96%	✓
18	0.4615	96.68%	0.5032	95.10%	★ BEST
20	0.4450	97.37%	0.4876	95.02%	✓

■ Final Performance Summary

Best Validation Accuracy: 95.10%

Best Training Accuracy: 97.37%
Total Training Time: 95.8 minutes

■ Model Checkpoint

Location: D:\ALS\outputs\vit_light\best_vit_model.pth

Repository: github.com/RangeshPandianPT/Liver-fibrosis-staging

Generated by Liver Fibrosis Staging Pipeline
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