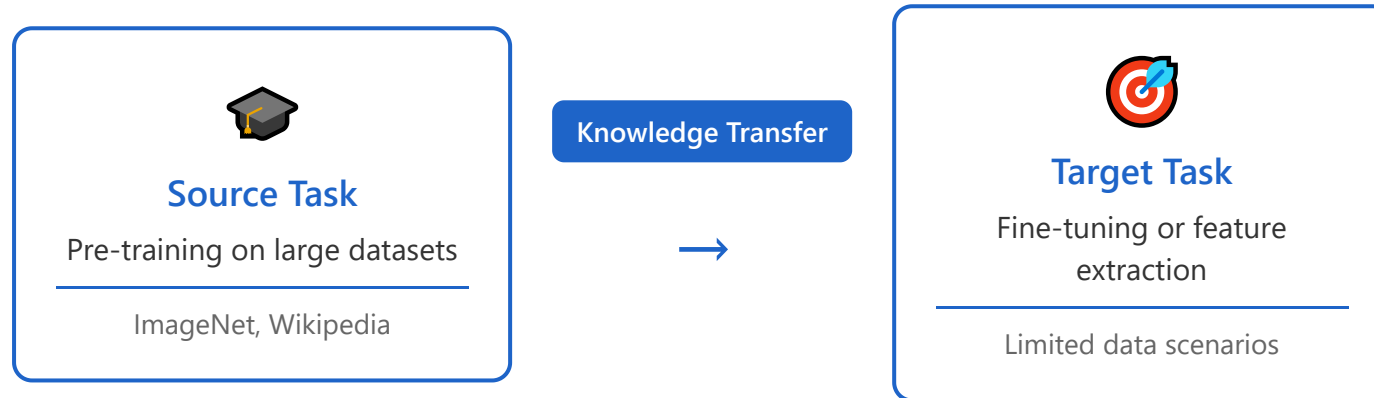


Transfer Learning Strategies

Leverage knowledge from source task to improve target task performance

Transfer Learning Process



Particularly effective when target task has limited data



Source and target tasks should be related for best results



Reduces training time significantly



Reduces computational requirements



Key Technique in Modern Deep Learning Applications



Transfer Learning Performance Comparison

❌ Training from Scratch

Small Dataset (500 images)

Training Time: 8 hours

Accuracy: 65%

Epochs: 200

VS

✅ Transfer Learning

Same Dataset (500 images)

Training Time: 1 hour

Accuracy: 92%

Epochs: 20

💡 **8x faster training** and **27% higher accuracy** with pre-trained ImageNet model