Transformer + Wavelet Architecture (68.5% Accuracy)

EEG Input
(14 × 128)

Wavelet Features
(280 features)

Input Projection
(14 → 64)

Positional
Encoding

Multi-Head Attention
(8 heads, 64 dim)

Feed Forward
(64 → 256 → 64)

Global Average
Pooling

Feature Fusion
(128 features)

Dense Layer
(64 units)

Output
(2 classes)

Performance Metrics:
• Test Accuracy: 68.50%
• Balanced Performance
• Self-attention mechanism
• Early stopping: Epoch 21
• Parameters: ~75K