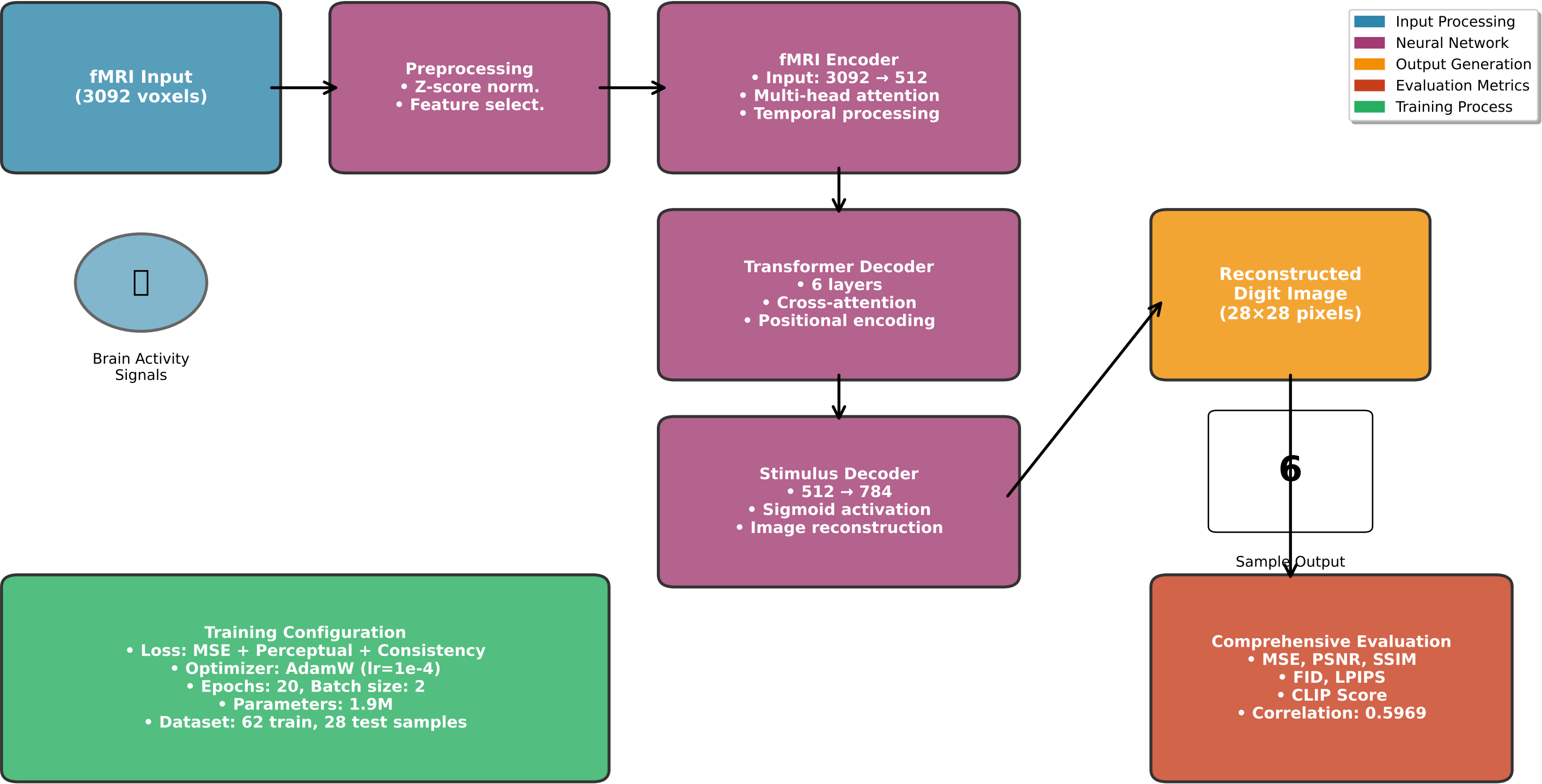


Brain Decoder Architecture for Visual Stimulus Reconstruction

fMRI Signal Processing → Neural Network Decoding → Image Reconstruction



Technical Specifications:

- Framework: PyTorch
- Architecture: Transformer-based encoder-decoder
- Input: fMRI signals (3092 voxels)
- Output: Grayscale images (28×28 pixels)
- Training: Real brain-image pairs from digit69_28x28.mat
- Performance: Correlation 0.5969, PSNR ~20dB, SSIM ~0.6