

Multimodal Fusion

Combines representations from multiple modalities for unified understanding



Early Fusion

Combine raw features before processing



Intermediate Fusion

Combine learned representations at hidden layers



Late Fusion

Combine decisions from separate modality models

Advanced Techniques



Attention Mechanisms: Focus on relevant modalities



Cross-modal Learning: Use one modality to improve another



Applications

Video Understanding

Visual QA

Multimodal Sentiment Analysis



Improves robustness and performance over single-modality approaches