

Masked Token Prediction: Step-by-Step Process

Input: "The [MASK] sat on the mat"



Embeddings: Token + Position (768-dim vectors)



Transformer Layers: 12 encoder layers process



Output at [MASK]: Hidden state h_{mask}



Project: $h_{\text{mask}} \times W_{\text{vocab}} \rightarrow \text{logits (30K)}$



Softmax: $P(\text{cat})=0.73$, $P(\text{dog})=0.15$, $P(\text{person})=0.04$