

# Task-Specific Decoding Recommendations (2025)

Task	Recommended Parameter	Why?
Machine Translation	Beam Search	width=3-5 Deterministic, quality critical
Factual Q&A	Greedy / Low Temp	T=0.1-0.3 Single correct answer needed
Summarization	Beam Search	width=4 Balance coverage + conciseness
Code Generation	Greedy	T=0 Syntax errors costly
Creative Writing	Nucleus / Contrastive	p=0.9, $\alpha$ =0.6 Diverse but coherent
Dialogue Systems	Nucleus	p=0.85-0.95 Natural variation needed
Story Generation	Contrastive	$\alpha$ =0.5-0.7 Avoid repetition in long text
Long-form Articles	Contrastive	$\alpha$ =0.6, p=0.9 Degeneration prevention

Task-Specific Decoding Recommendations



Quantlet  
Where Knowledge Meets Code  
fostering transparency, replicability, and  
integrity in scientific exploration