

Task-Specific Decoding Recommendations (2025)

Task	Recommended Algorithm	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, α =0.6	Diverse but coherent
Dialogue Systems	Nucleus	p=0.85-0.95	Natural variation needed
Story Generation	Contrastive	α =0.5-0.7	Avoid repetition in long text
Long-form Articles	Contrastive	α =0.6, p=0.9	Degeneration prevention