

Decoding Strategies: Same Prompt, Different Outputs

Prompt: "The weather is..."

Greedy (T=0)

"The weather is nice today and the weather is nice today and"

← Repetitive!

Beam Search (size=3)

"The weather is beautiful and sunny with clear blue skies"

← Good balance

T=0.5, p=0.9

"The weather is absolutely gorgeous and perfect for outdoor activities"

T=0.7, p=0.9 (Default)

"The weather is quite pleasant with mild temperatures throughout the day"

← Very creative!

T=1.0, p=0.95

"The weather is remarkably favorable for this time of year, surprisingly warm"

- Greedy: Always picks highest probability → deterministic, often repetitive
- Beam: Explores multiple paths → better quality, still deterministic
- Low T: Focused sampling → high quality, slight variation
- Mid T: Balanced → good mix of quality and creativity
- High T: Creative sampling → diverse, unpredictable

T=1.5, p=0.95 (Creative)

"The weather is exceptionally magnificent, creating an atmosphere of pure serenity"