

(a) Long Story Generation

Example Prompt: "Write a story about a single mother and child whose car breaks down during a winter road trip in 1982. Show their struggle and unexpected kindness from strangers..."

Target Length: 8,000-10,000 words



LLM Generation

Long Story: "December 1982. The Pontiac dies on a Nebraska highway. Mara wraps Jamie's cap straight, breath fogging the glass. ① "Mommy, I'm cold," whimpers five-year-old Jamie, clutching his teddy bear. A truck stops. ② "Can you help my fifteen-year-old son?" Mara asks the driver, gesturing to Jamie..."



Long Story 1

Long Story 2

Long Story 3

(b) Consistency Analysis

LLM Judge



Stage 3: Evidence Chains

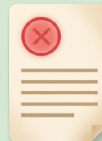
Reasoning: LLM explains why the two spans cannot both be true.

Evidence: Cites both conflicting spans (A/B) and records where each appears in the story.

Conclusion: Error Type label.



Stage 2: Contradiction Pairing



Consistent

Contradictory

Stage 1: Category-Guided Extraction

Error Type: Timeline & Plot Logic



World-building Setting



Character



Factual Consistency



Narrative Style



Json Output

Story 1 ----- error-type count: **e1**, words: **w1**
 Story 2 ----- error-type count: **e2**, words: **w2**
 ...
 Story 3 ----- error-type count: **e3**, words: **w3**

(c) Weighted Scoring

Consistency Error Density (CED)

$$CED_{m,i} = \frac{e_{m,i}}{w_{m,i} / 10000} \quad \overline{CED}_m = \frac{1}{N} \sum CED_{m,i}$$

Group Relative Rank (GRR)

$$Q_{m,i} = \frac{w_{m,i}}{1 + e_{m,i}} \quad GRR_m = \frac{1}{N_m} \sum \text{rank}(Q_{m,i})$$