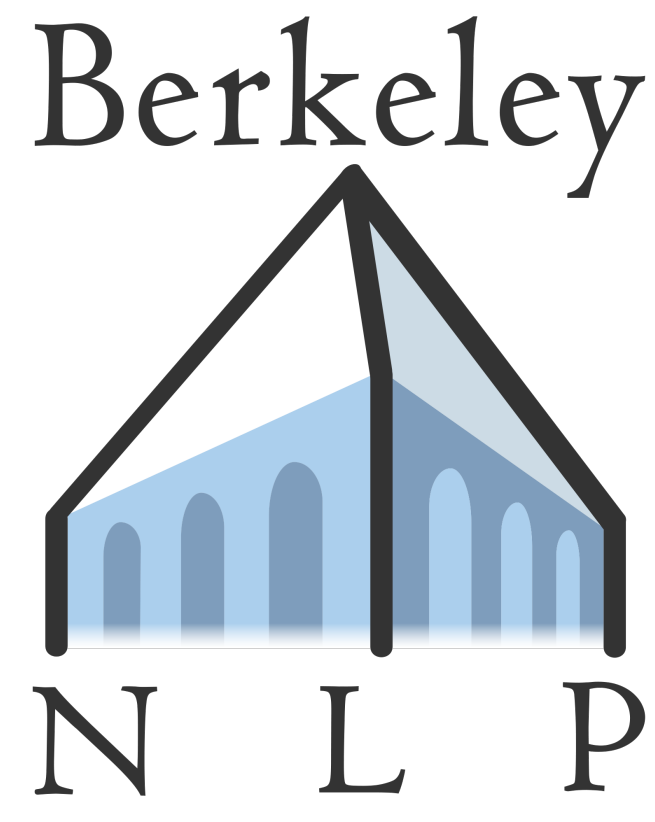
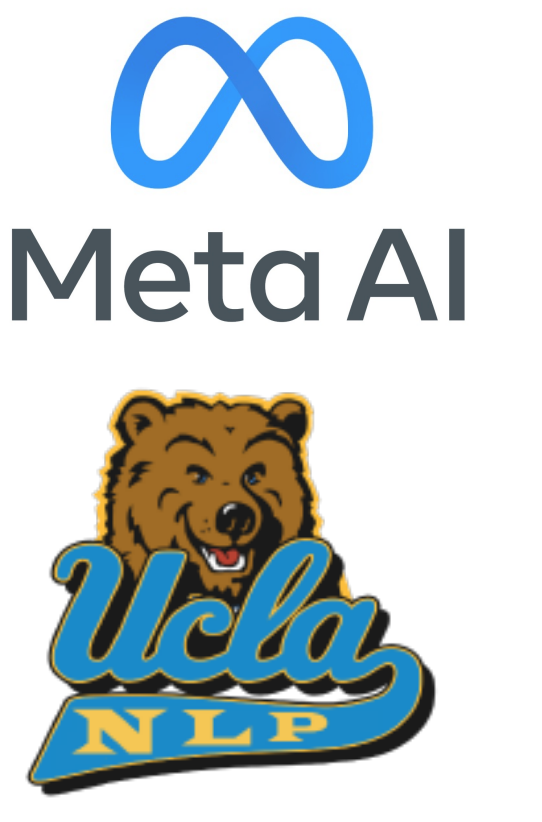


Re³: Generating Longer Stories With Recursive Reprompting and Revision



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Premise

A new law grad returns home to start her career but struggles with the broken justice system.

Generation

Plan	Premise	Premise: A new law grad returns home to start her career but struggles with the broken justice system.
	Setting	Setting: The story is set in a small town in the United States. <small>LLM</small>
	Characters	1. Character Portrait: Liza Turner is a 22-year-old woman. <small>LLM</small> 2. Character Portrait: Peyton Turner is Liza's older sister. <small>LLM</small>
	Outline	Outline the main plot points of the story. <small>LLM</small> 1. Liza Turner graduates from law school. 2. She moves back to her hometown to start her career. 3. She struggles with the reality of the broken justice system.

Re³ generates a setting, characters, and outline (blue text) for the given premise by prompting a large language model.

Re³ generates a coherent long-form story by repeatedly querying a large language model **LLM** with a structured prompt—manifesting the most relevant context in the plan and previous story—followed by reranking and editing continuations for quality and consistency.

Revision

Rewrite	Draft Continuation 1	All the lights were off and there was no sign of Peyton. She shrugged and decided to go out and spend the rest of her evening at one of New York City's many bars.	Coherence + Relevance -1.7 ✗ Rerankers (Story Data)
	Draft Continuation 2	She knew Peyton was probably working late at his restaurant so he wouldn't come home early to see her, but she wouldn't put it past him to do it anyway.	Coherence + Relevance 2.0 ✓ Rerankers (Story Data)

Re³ reranks candidate story continuations for coherence with the previous story and relevance to the plan. The rerankers in this module are the only component of Re³ that relies on preexisting story data.

Draft	Relevant Context	Relevant context: Liza Turner is a 22-year-old woman. Peyton Turner is Liza's older sister.
	Previous Sections' Outlines	Previous story summary: Liza Turner graduates from law school.
	Recent Story Summary	Immediately before current passage: Liza Turner returns home to her small town, feeling both familiar and unsafe. She is unsure if she wants to live there, but hesitant to leave.
	Upcoming Section Outline	In the upcoming passage, She moves back to her hometown to start her career.
	Auto-regressive Context	Full text below: She locked up the car and carried her things into the house through the back door in case Peyton was home still. To generate each next passage, Re ³ employs <i>recursive reprompting</i> , reconstructing the prompt based on the most relevant parts of the plan (blue) and previous story (grey). The full prompt is finally fed to LLM .

Plan Generate a setting, characters, and outline by prompting a language model.

Draft Write story continuations by prompting based on the plan and previous story.

Rewrite Rerank story continuations for plot coherence and premise relevance.

Edit Edit selected continuation to maintain long-range factual consistency.

Edit	Selected Continuation	She knew Peyton was likely working late at his restaurant so he wouldn't come home early to see her, but she wouldn't put it past him to do it anyway.
	Inferred Facts	Peyton Turner Peyton Turner is male. Peyton works at a restaurant. <small>LLM</small>
	Attribute Dictionary	Peyton Turner Younger sister: Liza Turner Gender: female male Workplace: restaurant <small>LLM</small>
	Editing Instruction	Edit so that Peyton Turner is female.
	Final Edited Continuation	She knew Peyton was likely working late at her restaurant so she wouldn't come home early to see her, but she wouldn't put it past her to do it anyway. <small>LLM</small>

Re³ maintains a structured attribute dictionary for each story entity, updating with each new passage. When a factual contradiction is detected, Re³ edits the passage accordingly. However, detecting long-range factual inconsistencies with high precision is extremely difficult, and there remains substantial room for improvement.

Example GPT3 Story

Premise

After years of being content with only a small inheritance, Sarah's life is turned upside down when she discovers she is actually a millionaire. She must learn to navigate her new life of luxury while also dealing with the guilt she feels over her new-found fortune.

Generated Story (Abridged)

...[19 words]...
I had no friends, no family, and no prospects for the future. ...[68 words]...
What I wouldn't give to have been born into a life of luxury ...[502 words]...
someone must have left a bag at my place by mistake. ...[50 words]...
Inside the bag sat over a million dollars in cash! ...[62 words]...
I knew right away that it was dirty money ...[405 words]...
the first thing that I did was call the police! ...[128 words]...
"Listen lady, this isn't your money ...[173 words]...
None of them could help me though—not my friends, not my kids, and certainly not even my husband ...[329 words]...
something told me that leaving the cash on my front step was a very deliberate and smart thing to do. ...[69 words]...
I'm going to tell you a story about someone who never existed and how they ended up on the other side of the world with a pile of cash ...[107 words]...
one of them was diagnosed with cancer. ...[58 words]...
The family used every ounce of money that they could ...[286 words]...

A rolling window GPT3 baseline using the same context window as Re³ fails to maintain long-range coherence and premise relevance.

Example Re³ Story

Premise

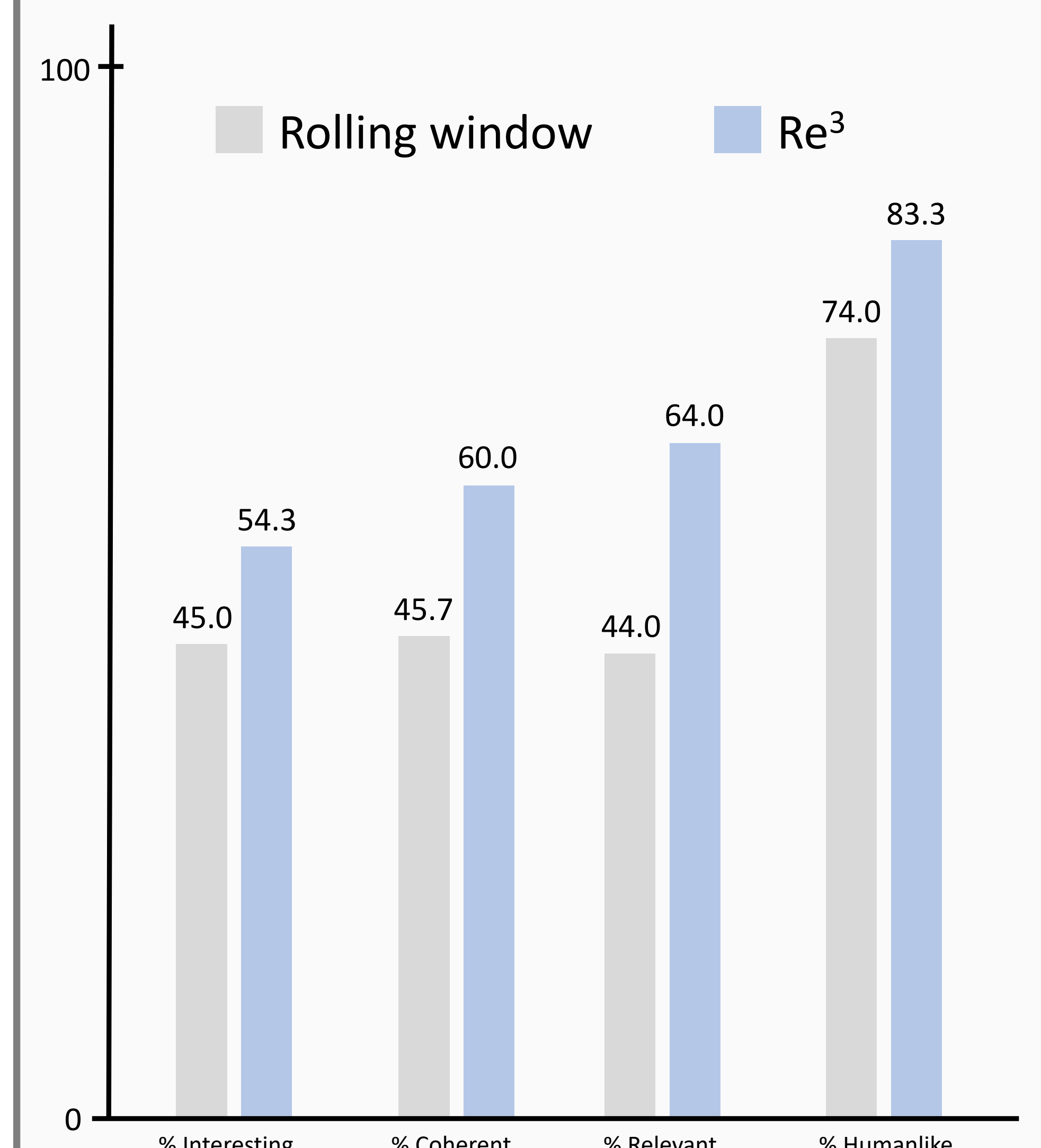
After years of being content with only a small inheritance, Sarah's life is turned upside down when she discovers she is actually a millionaire. She must learn to navigate her new life of luxury while also dealing with the guilt she feels over her new-found fortune.

Generated Story (Abridged)

Sarah Jensen never knew she had inherited a fortune until her mother died. In fact, she had never met her father ...[15 words]...
The only thing Sarah did know was that he had died long ago and that her mother had been left a sizeable inheritance. ...[23 words]...
Sarah's mother never spent any of the money ... all that mattered to her was how much it would mean to her daughter when she inherited it ...[81 words]...
Sarah learned that she was a millionaire. ...[417 words]...
She would never have had a chance like this - an opportunity to be financially independent, to live on her own ...[544 words]...
Now that she was rich, things were going to be different for her. She could afford a hotel suite and a lavish meal if she wanted it. ...[450 words]...
The words "Forgive me, father, for I have sinned" came unbidden into her mind as she reached out for her drink and took a large sip straight from the glass. ...[383 words]...
But the guilt was weighing on her now. ...[346 words]...

Re³ demonstrates strong long-range coherence and premise relevance over thousands of words.

Quantitative Results



Compared to baselines, Re³ stories are rated by humans as more interesting, more coherent, more relevant to the premise, and more likely to have been written by a human.