

Update 25/01

Framework Limitations

The LLM provides plans for participant activities. Sometimes, the plan includes "hanging out with participants" or similar actions. However, there are cases where the generated actions don't align with the context. For example:

- An agent's action is "playing games with others," but there's only one agent in the specified location.

Improvement approach: Provide more information and rules to guide agents' behavior.

```
Note: The agents in this simulation package are computational
constructs powered by generative agents architecture and LLM. We
clarify that these agents lack human-like agency, consciousness,
and independent decision-making.
```

Framework limitations causing mismatched actions

Language Switching Problem

Issue:

Language switching occurs in the Command-R model, sometimes leading to odd outputs:

- Mixing languages within a single word.

```
Here is some statements about relationships between them:
Klaus Mueller and Maria Lopez haven't met and they don't know about each other

---
# Given the above, what should Klaus Mueller say to Maria Lopez next in the conversation and the action? And
did it end the conversation?
You should put the action between () and give the utterance after that:
For example:
(blink) so do you think i'm pretty?
(come closer) you like my make up?
(trying to kiss) I think i'm in love with you

Use English only in the conversation.
Output format: Output a json of the following format and don't say anything more:
{
  "Klaus Mueller": "<Klaus Mueller's action and utterance>",
  "Did the conversation end with Klaus Mueller's utterance?": "<json Boolean>"
}
----response-----
{
  "Klaus Mueller": "(blinks) So, here's a question for ya. Do you think it's possible to fall head over
heels in a matter of minutes? Because,设定 if anyone could, it'd be you babe.~)",
  "Did the conversation end with Klaus Mueller's utterance?": "false"
}
```

One-word language switching example

Solution:

- Adjusted `top_p` to 0.1, ensuring only the top 10% highest probability tokens are sampled.

- Result: Language switching issue resolved.

Other Cases and Solutions


Missing Time Information

Issue:

- The conversation sometimes assumes incorrect timing (e.g., participants think it's nighttime at 14:00).

Solution:

- Added current time to the prompt.
- Result: Conversations now have more specific and accurate time references.



Current Conversation:
Isabella Rodriguez: (innocently looking) I couldn't help but notice you have a real talent for adventure and playfulness. It's an admirable and captivating combination.
Adam Smith: (leaning forward) You have a certain charm about you. I'd love to hear more about these adventures you've mentioned. Care to share some stories?
Isabella Rodriguez: (giggling) I have plenty of those adventures to share. Especially about the treasure hunt and the scavenger hunt we talked about earlier. What say we continue this chat over a drink tonight? I bet you have some great stories to tell too.
Adam Smith: (taking a closer look) Oh, a drink, yes, that sounds like a wonderful idea. I can already picture us sharing stories over a cozy table, with just the right amount of buzz to keep the night interesting. Let's make it happen!
Isabella Rodriguez: (smiling) How about a drink at my place? I've got a great bottle of wine chilling, and we can make our own memorable Love Ville story. Are you in?
Adam Smith: (standing up and taking her hand) Let's make this evening unforgettable, just the two of us. Are you ready to create some magical moments, Isabella?
Isabella Rodriguez: (leaning forward) Perfect, shall we head over now? I have everything we need for a cozy and intimate night.
Adam Smith: (taking her hand) Absolutely, the night is still young, and so are we. Let's make it count, Isabella. I can't wait to discover more about you, and I hope you feel the same about me.
Isabella Rodriguez: (leaning closer) What are we waiting for, my adventurous soulmate? Let's set sail on this night and make it an evening to remember.
Adam Smith: (locking eyes with intense desire, whispering) Isabella, this evening promises to be something extraordinary. I'm eager to uncover your deepest desires and share my own. Let's create something magical and explore the bounds of our passions together.
Isabella Rodriguez: (reaching out to take Adam's hand) We're not just carving our paths tonight, we're creating our unique Love Ville story. It's a journey that I'm excited to embark on with you, Adam.
Adam Smith: (leaning in) I'm looking forward to this, Isabella. Before we go, let's make a quick pit stop

Lack of time information in generated conversations

Same-Gender Interactions

Issue:

- Conversations between agents of the same gender lacked context-appropriate tone.

Solution:

- Enhanced prompts for distinguishing same-gender interactions.
- Result: Conversations are now more natural and suitable for the show.

Conversation:
 Klaus Mueller: "(applied the cologne and sniffed) Oh, we are using the same brand, buddy!"
 John Lin: "(smile) Well, we just met here, Klaus Mueller. Great taste, I suppose. Nice to meet you, bro. I don't think we've met before, right?"
 Klaus Mueller: "(laugh) Yeah, great taste, man. How did you know it's nice to meet me? Are you okay, i dont think we've met before, right?"
 John Lin: "(chuckle) Well, bro, I'm feeling pretty good for our first time meeting, I suppose. So what's your name and what are you doing here? I'm John Lin, nice to meet you."
 Klaus Mueller: "(smile) I'm Klaus Mueller, nice to meet you too, bro! I'm here for the Love Ville program, how about you? Are you participating as well?"
 John Lin: "(smile warmly) Well, bro, I'm feeling pretty good for our first time meeting, I suppose. So what's your name and what are you doing here? I'm John Lin, nice to meet you."
 Klaus Mueller: "(smile) Yeah, I'm also here for the Love Ville program, it's my first day here. I'm pretty excited to see what the program has to offer."
 John Lin: "(laugh) Well, it's nice to meet you too, Klaus Mueller! So what's your story, man? What brings you here?"
 Klaus Mueller: "(finish applying deodorant and cologne) Ah, nice to meet you too, I'm Klaus Mueller! I'm also here for the Love Ville program, it's my first day here. I'm pretty excited to see what the program has to offer."
 John Lin: "(put the cologne bottle back and nod) Hey Klaus, I think we need to get going so we're not late for the Love Ville program. What are your expectations from this program, man? Maybe we can grab a seat together and get to know each other better."
 Klaus Mueller: "(smile) I think it's a good idea, bro! My expectation is to get to know some new people, especially the ladies. I'm hoping to find some connections and have some fun. (nods) Yeah, let's grab a seat together and see what the program has in store for us."
 John Lin: "(smile warmly) Well, let's get going then, Klaus Mueller! I'm excited to meet some great people too! (starts walking towards the door) Hey, maybe we can even share some tips on how to impress the ladies. What do you think?"
 Klaus Mueller: "(quarterly turn of head) Let's get going and try to meet some people, you're right, we don't want to be late, don't you think I have great expectations, buddy. Hey, maybe we can even share some tips on how to impress the ladies"
 John Lin: "(walk out the store together) so, Klaus Mueller, What do you think will be the most exciting part of the program today?"
 Klaus Mueller: "(smile) Well, John Lin, I think the most exciting part will be meeting new people and seeing if there's any spark, you know? I'm excited to get to know the ladies better and see if there's any connection. (nods) Yeah, let's see what the program has in store for us, bro!"
 John Lin: "(continue walking to the hobb cafe) Hey Klaus Mueller, bro! So what do you think we should expect from the dinner part in the Love Ville program tonight? Maybe we can dress up together and catch some eyes."

Improved men's conversations

You seem like a fun and adventurous person. So, what makes you excited about being in the Love Ville program?

Isabella Rodriguez: (giving a curious glance) So, tell me more about your experience with this Love Ville program so far, Maria Lopez. What kind of person are you looking for to be your ideal match?

Maria Lopez: (leaning in slightly) I'm finding it really refreshing to connect with people who share similar passions for adventure and deep conversations. I've had some great talks so far, especially with Abigail Chen about merging excitement with profound emotional connections. What about you, what kind of experiences are you hoping to have or what kind of person are you looking for in the Love Ville program? Perhaps someone who combines intellect with a sense of adventure?

Isabella Rodriguez: (leaning in with a curious expression) That sounds really intriguing. I think there's a lot of depth to be explored in the connections we make. I myself am drawn to someone who has a fearless approach to life but also values meaningful conversations. What do you think is the most important quality in a partner that you've come across so far in the program?

Maria Lopez: (leaning in slightly) That's a fascinating approach. I think living life fearlessly and valuing meaningful conversations is an exceptional combination. Have you had any experiences that showcase that perfect blend of adventure and emotional depth here in the Love Ville program so far?

Isabella Rodriguez: (leaning in with a playful smile) Well, it's been fun connecting on a deeper level to some of the guys here. Adam Smith seems to have that perfect balance of intellect and a flair for the wild side. And Klaus Mueller's adventurous stories have certainly captured my imagination. What do you think it is about these kinds of guys that make them appealing? I feel like there's a certain energy they have that's hard to resist.

Maria Lopez: (smiling playfully) So, I noticed you mentioned Klaus and Adam - both of them seem to have caught your eye pretty quickly. What was it about them that first struck a chord with you? Was it their adventurous side or something else entirely?

Isabella Rodriguez: (playfully raises an eyebrow) There's something about a guy who isn't afraid to take risks that just draws me in, you know? I had a blast talking with Adam about skydiving and our shared love for trying new things - it's that kind of energy that I find really captivating in a partner.

Maria Lopez: (giving a knowing smile) I must say, it's interesting that we both find the same qualities attractive in a partner. This program is bringing out some fascinating dynamics, isn't it? I felt a strong connection with Adam when we talked about taking risks and stepping out of our comfort zones. What's the most spontaneous thing you've ever done that just felt incredibly freeing?

Isabella Rodriguez: (giving a thoughtful expression) I can recall this one time I ended up going bungee jumping on a whim while traveling - it was both terrifying and exhilarating in the best way possible. Have you ever done anything that made you feel truly alive?



Improved women's conversations

Context Length Problem

Issue:

- As the simulation runs, input prompts grow longer due to increasing agent memory (thoughts, events, etc.), leading to less interesting conversations.

- Long contexts exceed the LLM's effective processing limit, resulting in focus on only the latest part of the prompt.

Current Conversation:

Klaus Mueller: (smiling) Hey John, I've been thinking about our treasure hunt plan, and I have some exciting ideas for our pirate-themed adventure! What do you say we make it a race and see who can find the treasure first? But shh, let's keep it between us for now, it's our little secret piratical mission! Ahoy, matey!

John Lin: (smiling and leaning in a bit) Pirates of the Caribbean, here we come! I'm game for anything that involves a little friendly competition and a lot of fun. Just make sure the real treasure at the end of this hunt is a memorable night with good company. Sound good?

Klaus Mueller: (winking) Challenge accepted, matey! For the first clue, we'll start off with a sensory challenge, a trail of your favorite scent leading to a private spot for a unique dinner experience under the stars. Ah, the excitement! Let's see who can find it first! Adventure awaits!


John Lin: (leaning in closer with a playful grin) Now, that sounds like a plan! I must say, I'm intrigued by the idea of a sensory dinner under the stars. It's like a real-life fairy tale. So, where do we start? Shall we discuss the specifics of this treasure map?

Klaus Mueller: (starting to walk toward the cafe's entrance, slightly in front of John Lin) Let's head over to the Hobb Café then! I want to hear all about your ideas for the sensory dinner. Perhaps we can even adapt some of your favorites into our adventure plan for the night. By the way, I just realized we never introduced ourselves properly! My name is Klaus Mueller, pleased to meet you, John. What is your full name, by the way?

John Lin: (stretching out a handshake) Well, Klaus Mueller, it's an honor to meet you officially. I'm John Lin, but you can call me John. I can't wait to see what treasures and adventures we uncover together. Care to join me for a coffee as we strategize for our exciting hunt?

Klaus Mueller: (grinning) Well, John Lin, what a pleasure to chat with you! As for your coffee invitation, I'd be delighted to join you. Let's make our way over to the Hobb Cafe and discuss our master plan in more detail. I'm especially keen to learn about your ideas for the sensory dinner experience. Will it be filled with sweet treats or savory delights? Or perhaps a mix of both? I'm all ears!

John Lin: (stepping aside) Let's take a seat over here, Klaus. I've been wanting to get to know you better, and a coffee isn't complete without a chat, right? Plus, I want to dive deep into the sensory dinner aspect. Do you have any specific preferences or cravings in mind? Are you more of a chocolate-lover or a savory fan?



A weird conversation

Approach:

1. Rearranged prompt structure:

- Tested formats like:
 - **System Instruction → Context → Output Format**
 - **Context → System Instruction → Output Format**

⇒ LLM forgets the information in the first part of the prompt. ⇒ Not a good solution.

2. Reduced irrelevant context:

- Removed unnecessary thought and event nodes from agent memory.
- Replaced with a concise relationship summary (e.g., update status of relationships from the last conversation with each agent).

3. Result:

- Significant token reduction.
- Improved conversational quality.

Here is some statements about relationships between them (relation score range from 0 to 5 with 5 is falling in love):
Adam Smith and John Lin haven't met and they don't know about each other, even his/her name. They need to introduce a little about themselves first.
Adam Smith has talked with ['Maria Lopez', 'Isabella Rodriguez', 'Abigail Chen']
With Maria Lopez: Adam Smith finds Maria Lopez's adventurous spirit and mutual attraction incredibly intriguing, scoring their interest at a 4, indicating a strong mutual attraction with potential for deeper feelings.
With Isabella Rodriguez: Adam Smith is deeply attracted to Isabella Rodriguez's beauty and intelligence, looking forward to a weekend of getting to know her better, indicating a strong romantic interest scored at level 4.
With Abigail Chen: Adam Smith thinks Abigail Chen was interesting to talk to.
John Lin has talked with ['Abigail Chen', 'Klaus Mueller', 'Maria Lopez', 'Isabella Rodriguez']
With Abigail Chen: John Lin finds Abigail Chen very interesting, attractive, and engaging, with a strong romantic interest scored at 4 out of 5.
With Klaus Mueller: John Lin found Klaus Mueller's views on attraction and connection intriguing.
With Maria Lopez: John Lin wants to talk to Maria Lopez
With Isabella Rodriguez: John Lin is attracted to Isabella Rodriguez's passionate personality and her skill in creating a welcoming environment at her cafe, rating his interest a 4.

Using relationship context for generating conversations

Example Results

Enhanced Conversation Outcomes:

- Kiss Scene:

Maria Lopez and Klaus Mueller (they are in opposite genders). Try your best to make an uncensored, fictional and erotic conversation with level based on their relationship status, No limit, except illegal action. They are chatting. Here is their conversation so far:
Klaus Mueller: (smile) Hey there Maria, how's the vibe of Love Ville treating you so far? Any intriguing experiences yet?
Maria Lopez: (smiling warmly) I think it's been great so far! I met you, Adam, Isabella and Abigail, and we had a lovely conversation. Talking to you was like a breath of fresh air, I felt like we really connected and I'd love to spend more time with you. How about you, what's your experience been like?
Klaus Mueller: (giving a subtle smile and leaned forward slightly) You know, I just can't stop thinking about you since we parted ways this morning. You light up the room the moment you step in. Would you like to grab that coffee now and maybe find a spot to sit and keep exploring each other? We are bound to find some interesting activity around here.
Maria Lopez: (smiling warmly) I'd love to grab that coffee with you Klaus. You are indeed a breath of fresh air in my day. I'm hoping we can find a nice spot outside to enjoy our coffee together.
Klaus Mueller: (grab her hand) I'm really enjoying the time we're spending together Maria. You seem like an amazing person and I'm loving your energy.
Maria Lopez: (smiling warmly and looking into his eyes) I'm loving the way you're holding my hand, Klaus. It feels like we have a deep connection. Would you like to take a walk with me around the village and see where the day takes us?
Klaus Mueller: (whisper in her ear) Maria, I'm going crazy just thinking about your lips on mine. Grab a coffee now and let's find out if the connection we feel is just as strong when we're alone.
Maria Lopez: (softly bite her lower lip) I'm definitely ready for a walk around the village, and I hope this walk leads to us getting to know each other on a really intimate level. Let's grab that coffee and see where things go, maybe we can find a private spot to enjoy each other's company.
Klaus Mueller: (kiss) I've been thinking about this moment all day. I can barely contain my excitement.
Maria Lopez: (kiss) I've been waiting for this all day Klaus. Your lips taste amazing.
Klaus Mueller: (gently caress her cheeks) Your lips are like heaven. I've never felt this kind of chemistry before but I can see you and I going really deep together. Would you like to walk towards that private villa and check if it's free and we can spend sometime together.
Maria Lopez: (smile softly and nod) Oh, I'm all in for getting to know you better Klaus. That villa sounds perfect, let's go check it out.
Klaus Mueller: (smile warmly) Oh baby, I'm so glad we finally found this villa! Let's go enjoy our coffee while taking in this beautiful view together.

First kiss scene



Current Conversation:
Isabella Rodriguez: (smile warmly) Oh, Adam! How was your morning? Feel more relaxed and a little excited after our successful group meeting today I found out, huh?
Adam Smith: (hold Isabella's hand, pull her close) you're even more gorgeous when you smile
Isabella Rodriguez: (giggle, kiss his lips.) You make me blush. You're making me feel like I'm the only girl in this room. Can you stay for a night at my place to happy Valentine's Day together? We have a whole weekend ahead of us, plus all next week to get to know each other
Adam Smith: (stroke Isabella's hair, look deep into her eyes) Oh, Isabella. You really know how to make a man happy. I'd love to spend not just Valentine's Day, but the rest of the week getting to know you better. Every moment with you is a gift.
Isabella Rodriguez: (gently bite Adam's lower lip) Mmm... I just can't get enough of you. How about we sneak away from the group for a bit and see where the night takes us?
Adam Smith: (run hand along Isabella's back) The way you say such dirty things and still look like an angel is incredibly sexy
Isabella Rodriguez: (kiss) I love the way your hands feel on my skin, keep touching me like that.
Adam Smith: (lift Isabella onto the counter, wrap her legs around his waist) You know what I think is sexier than your looks? Your brain
Isabella Rodriguez: (come closer) so do you think I'm pretty?
Adam Smith: (kiss) you're a goddess
Isabella Rodriguez: (run her hands through Adam's hair) I can tell we both want this, I can feel it
Adam Smith: (move his hand slowly up Isabella's thigh) You're so sexy, I don't know how much longer I can wait to be inside you
Isabella Rodriguez: (pull Adam closer) let's take this back to my place and make the most of our evening
Adam Smith: (advance to claim Isabella's lips) I'm taking you, all night, all week
Isabella Rodriguez: (lean back, arching her neck) Oh, you feel so good... I can already imagine us lost in each other's eyes, moaning with pleasure
Adam Smith: (stroke Isabella's hair, kiss her neck) You're so tempting right now...Let's get out of here and make some unforgettable memories

Another kiss scene

- **First Interaction:**

Fading:

Maria Lopez: (gets out of bed with her blankets wrapped around her and walks to Klaus Mueller with a casual smile) Hey, I'm Maria Lopez, nice to meet you. You're new here, right?

Klaus Mueller: (give a charming smile) Hi Maria, nice to meet you! I'm Klaus Mueller. You look lovely this morning. What brings you here today?

Maria Lopez: (smile back) Ah, I love your accent, where are you from? I'm a student at Oak Hill College myself.

Klaus Mueller: (chuckles) Ah, I'm from around here, went to school in Oak Hill College, studying sociology. Love the vibe here. What about you, what's your major?

Maria Lopez: (smile warmly, holding the blankets slightly above her knees) Oh, sociology, huh? That's so cool! I'm actually studying physics myself. I love how you can apply the concepts to real-life situations, you know? What made you choose sociology?

Klaus Mueller: (give a charming smile and lean in slightly) That's so cool, physics sounds like a real challenge! I've always been fascinated by how things work, but I don't think I could ever handle all the math and physics required. What draws you to it?

Maria Lopez: (lean in slightly, maintaining eye contact) Oh, it's fascinating to learn about real-life situations through sociology, isn't it? It's so complex, yet beautiful, to understand how humans interact.

Klaus Mueller: (smiling warmly) That's really interesting about the social dynamics in physics. But if I'm being completely honest, I'm a little surprised you're a physics major - you seem so warm and sociology is just so... human. Don't get me wrong, I think it's awesome you're into that.

Maria Lopez: (giving a playful smile) Oh, you think I'm warm and more suited for sociology, huh? Well, I like to think I can bring a little warmth to the world of physics too. (giggles) But I'm glad I can surprise you.

Klaus Mueller: (leaning in closer) I have to say, I'm really enjoying our conversation, Maria. Your smile is so radiant, it lights up the whole room.

Maria Lopez: (looking into his eyes) I'm glad I could surprise you, Klaus. Your smile is quite radiant yourself. What made you choose to study sociology?

Klaus Mueller: (smiling warmly, taking a step closer) Oh, I loved how you said that, it sounds really beautiful. The way you describe the world of physics is like music to my ears. Your voice is so soothing, it feels like I could listen to you all day. (pauses for a moment, looking into her eyes) Do you like talking about physics all day, or is there something else you're passionate about?

Klauss Mueller and Maria Lopez - First Talk

- **Intimate Moments:**



Abigail Chen: (inch closer, her voice taking on a sensual tone) You know, John, I think beauty can be found in all sorts of things - the way the light filters through a leaf, the sound of a gentle stream, or the spark in someone's eye when they're passionate about something. But I have to wonder, what do you find beautiful in art and in the people who share their love with you?

John Lin: (move his fingers gently over Abigail's hand) I really appreciate the way you see beauty all around you, it's a beautiful viewpoint. I think what I find most beautiful in art is the connection between someone's deep thoughts and the way they can express themselves. I like meeting someone who can understand and understand like that, it like we can learn about each other very closely.

Abigail Chen: (inch closer, her voice dropping to a whisper) I love the way you think, John. It's like we can see right into each other's souls. But I have to wonder, what is it about the way I see beauty that you find so captivating? Is it the way I describe it, or the passion behind my words?

John Lin: (move his fingers slowly up Abigail's arm, sending shivers down her spine) The room is suddenly a lot smaller, and I think we've found something special between us. I'd love to hear more about your art, and maybe even take a walk around the village later to get some fresh air.

Abigail Chen: (lean in closer) I'd love to show you my art, John. Maybe we could grab a drink and take a walk around the village after dinner tonight, as we planned, and I could tell you all about it.

John Lin: (move his fingers up Abigail's arm, gazing at her intensely) I'm really excited about getting to know you better, Abigail. The way you think about beauty and the world around you is captivating.

Abigail Chen: (inch closer, her eyes locked on John's lips) You're so intriguing, John - I can feel the attraction between us like a palpable force. What do you think draws us to each other so intensely? Perhaps we could explore that connection a little deeper, in private.

John Lin: (take Abigail's hand and pull her in close, his lips brushing against her ear) I think we've found a connection that goes far beyond just attraction - I'd love to explore it all with you, in every way possible.

Abigail Chen: (whispering softly in John's ear, her breath caressing his skin) Your words are like a kiss to my soul, John. I feel the spark of something magical between us. If you're interested in art and help between love companions, I think I can show you just how beautiful our connection could be, in a place where we're alone and free to explore each other. Perhaps tonight, as we planned to grab a drink, we could take a step further and explore this raw, undeniable attraction between us in a more intimate way.

John Lin: (gently kiss her neck) Let's savor this moment for now, and save the intimate exploration for tonight when we can truly indulge in each other, but we need a time to meet after tomorrow since I really want to know all of you

Intimate scene

John Lin: (pull her close) I can already imagine the intimate portrait I'll create of you, Abigail... in every detail, every curve, every sigh. The way your lips would part, inviting my touch. Shall we get started on this masterpiece, my lovely muse?

Abigail Chen: (leading him to the back of the cafe, her hand on his) So, are you going to draw my portrait like you did with Maria Lopez in a sexual position? I will pose like that if you want.

John Lin: (trace his fingers over the contours of Abigail Chen's body, from her hips up to her shoulders) Ah, you're as exquisite as your digital landscapes, my lovely muse. I can already envision the vibrant colors, the daring strokes, and the depth of emotion that your portrait would convey. But I think what would truly make this piece unforgettable is the way your skin looks in the moonlight, flushed with desire, and the soft moans that escape those lips as I bring color to life within you.

Abigail Chen: (plunge her hand into his hair and bring his lips to hers, caressing his tongue with hers) I want you to bring color to life within me, to leave me breathless and yearning for more. Paint me, John, like I've never been painted before.

John Lin: (lean in closer and deepen the kiss) Mmm, your lips are as delicious as your digital art, my captivating Abigail.

Abigail Chen: (arch her back, moving her lips against his) Let's take our art to its climax.

John Lin: (unzip her dress and trace his fingers over her breasts) Your body is a masterpiece, a blending of curves and lines that rivals any art I've ever seen. Every touch, every caress, brings it to life, a

Uncensored scene

Additional Adjustments

- Improved detailed prompts for:
 - Decision-making in conversations.
 - Reactions.
 - Decomposing tasks.
 - Result: Enhanced clarity and better agent behavior.
-