

Personas, Roleplaying, and Interactive Storytelling

Lara J. Martin (she/they)

<https://laramartin.net/interactive-fiction-class>

Learning Objectives

Define roleplaying and personas

Distinguish between three different types of personas (and see examples of each)

Recognize how interactivity affects storytelling

Definitions

Personas: profiles of a person based on data, characteristics, demographics, etc.

Roleplaying: pretending to be in a scenario you're not currently in (which can include pretending to be someone else)

Personas in NLP: Roleplaying (acting and speaking) as a specific person or type of person

Interactive Storytelling: the co-creation of a story; can be pre-written with choices selected “on the fly”

- Does not contain puzzles or gameplay elements

Types of Personas (Chen et al. 2024)

“1. **Demographic Persona**, i.e., focusing on groups of people sharing common characteristics, such as occupations, ethnic groups, personality types, etc. These personas are inherent in LLMs, and role-playing them capitalizes on the statistical stereotypes in LLMs [...]

2. **Character Persona**, which represents well-established and widely-recognized individuals, especially in the existing literature, including celebrities, historical figures, and fictional characters. [...]

3. **Individualized Persona**, referring to digital profiles built and continuously updated based on personalized user data. [...]”

Type 1: Demographic Persona

Definition

“Encapsulates the distinct attributes of particular **groups of people**, such as their language patterns, expert knowledge, and subtle behavioral traits.”

Data Sources



Pretraining Corpora

Examples

Occupations: doctor, chef, student, PM, researcher, ...

Personality Types: introverts, ENFJ, considerate, ...

Social Groups: Gen Z, millennials, ...



Use Cases



Please act as **a doctor** and help me analyze this medical report. ...

I'll do my best to explain them. However, for any medical advice, diagnosis, ...



Please act as **an introvert** and show me how to socialize in a party. ...

Socializing as an introvert at a party may require a more reserved and ...



Applications

AI DUNGEON Ememe STORIOR

Type 2: Character Persona

Definition

“Embodies **well-established characters**, encompassing both real-world public figures and fictional entities, each characterized by definitive attributes and narratives.”

Data Sources



WIKIPEDIA
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Fictional Works / Corpora

Examples

Historical Figures: Napoleon, Confucius, Aristotle, ...

Fictional Characters: Legolas, Harry Potter, Batman, Kong, ...

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Use Cases



Asuka, I always feel inferior and am afraid to make friends in real life.

Stop being such a wimp! (everyone has their flaws but that's no excuse to fear making new friends). *I believe in you... baka.*



I just don't know how to... Could you teach me?

(sighs) Alright, just do it like me: be confident and start practicing your social skills with people.



Applications



character.ai

Type 3: Individualized Persona

Definition

“Refers to **ever-evolving personal profiles** constructed from the behavioral and preference data of specific individuals, encompassing personal profiles, dialogues, actions, and behaviors.”

Data Sources



Personalized Behavior History

Examples

Personalized Copilots: Travel agent, shopping agent, research paper recommender, ...

Personal Secretary: Siri, Jarvis, ...

Use Cases



Help me plan a trip to Seattle for five days.

According to your profile, here are the travel itinerary for your stay in Seattle: ...



I don't want to visit Mt. Rainier.

Noted that you don't like hiking... Here are alternatives you may find interesting...



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BHuman



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LIGHT

Character:	Thief	Gravedigger
Persona:	I live alone in a tent in the woods. I steal food from the townspeople and coal from the blacksmith. The village police can not find me to put me in jail.	I am low paid labor in this town. I do a job that many people shun because of my contact with death. I am very lonely and wish I had someone to talk to who isn't dead.
Description:	The thief is a sneaky fellow who takes from the people and does so in a way that disturbs the livelihood of the others.	You might want to talk to the gravedigger, specially if your looking for a friend, he might be odd but you will find a friend in him.
Carrying:	meat, potatoes, coal	shovel
Wearing:	dark tunic, cloak	<i>nothing annotated</i>
Wielding:	knife	<i>nothing annotated</i>

(b) Example characters annotated via character collection tasks.

ConPer

Context: . . . Artur Boruc, a Polish national pilot, was going to get the group infiltrated into the area and prepared for the attack. . . . Metal began to tear through the thin wings outside the small windows and pinged heavily off the underside of the plane, a quiet arrival in Poland wasn't going to be an option anymore.

Persona A: [Boruc] A skilled pilot, trained in operating flight controls on the most common planes.

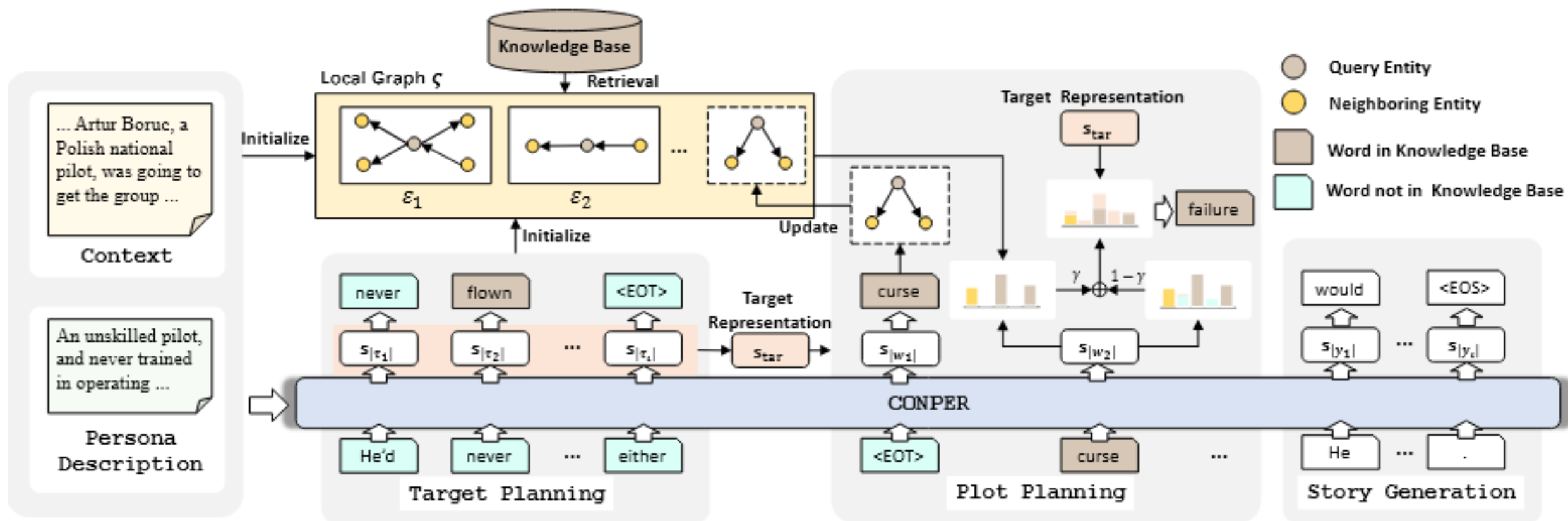
Generated Story by CONPER Conditioned on Persona A: . . . He had been doing this much before, almost a week ago. He took a long pull of the airlock, checked his controls, and made a quick mental note of the exact sequence of instructions. He knew that he couldn't be sure if this would be safe for much longer. . .

Persona B: [Boruc] An unskilled pilot, and never trained in operating flight controls.

Generated Story by CONPER Conditioned on Persona B: . . . He cursed as the plane suffered a complete failure and in a way had caused it to come to a stop, . . . He'd never flown before, so he didn't know how to pilot in this situation and his experience of the controls had not been good either. . .

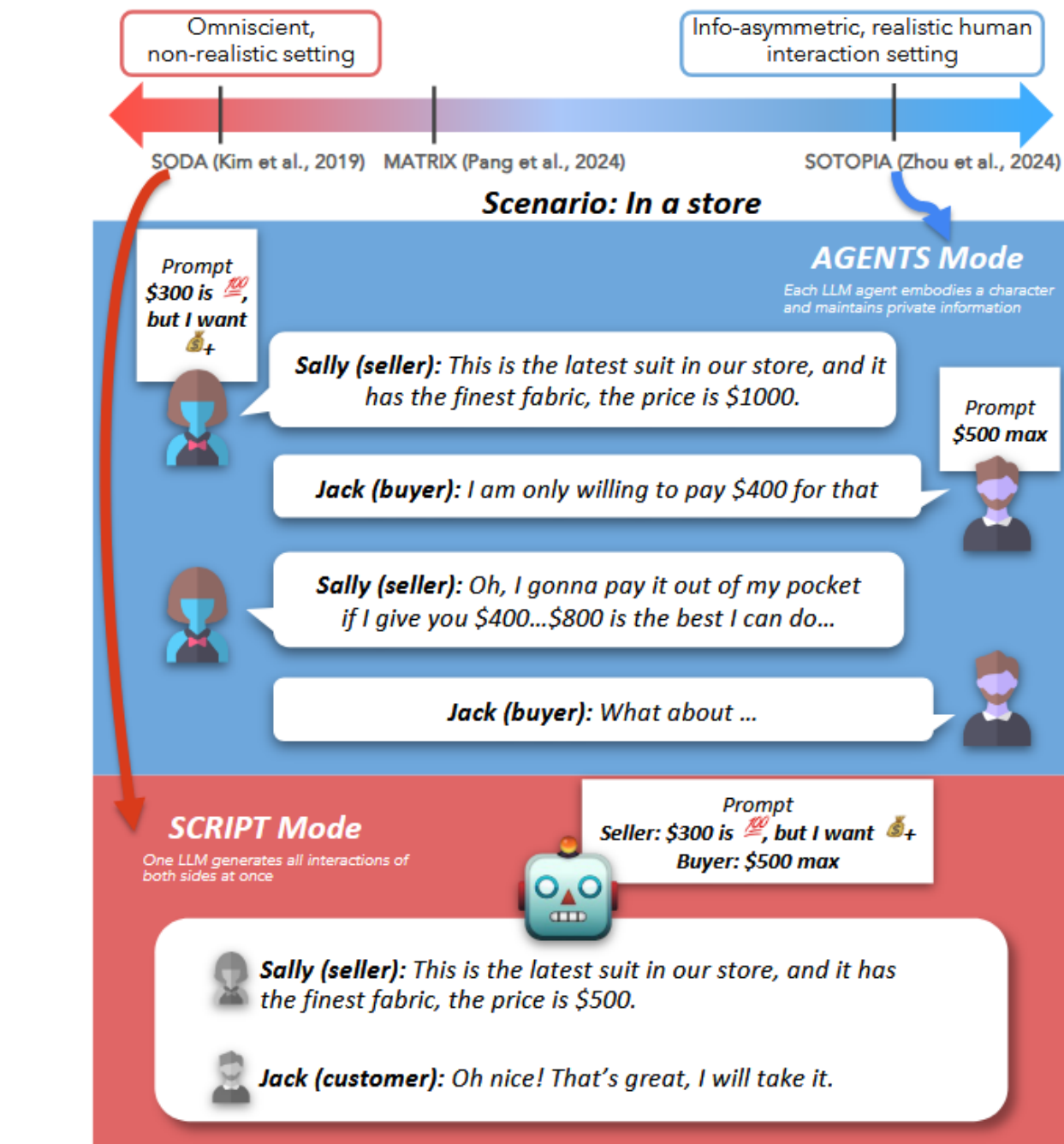
Table 1: An example for controlling the protagonist's persona in story generation. The **Context** and **Persona A** are sampled from the STORIUM dataset (Akoury et al., 2020). The protagonist's name is shown in the square bracket. And we manually write **Persona B** based on **Persona A**. We highlight the sentences which embody the given personas in red.

ConPer



Agent vs Script

“LLMs perform better in unrealistic, omniscient simulation settings but struggle in ones that more accurately reflect real-world conditions with information asymmetry”



Agent vs Script

Zhou et al. (2024) also found that:

LLM scripts

- Are more likely to reach the planned social goal
- Sound more natural
- Can be biased

LLM agents

- Are verbose
- When finetuned on Script simulations can perform slightly better (GPT-3.5)

Sharing information across agents doesn't improve goal completion

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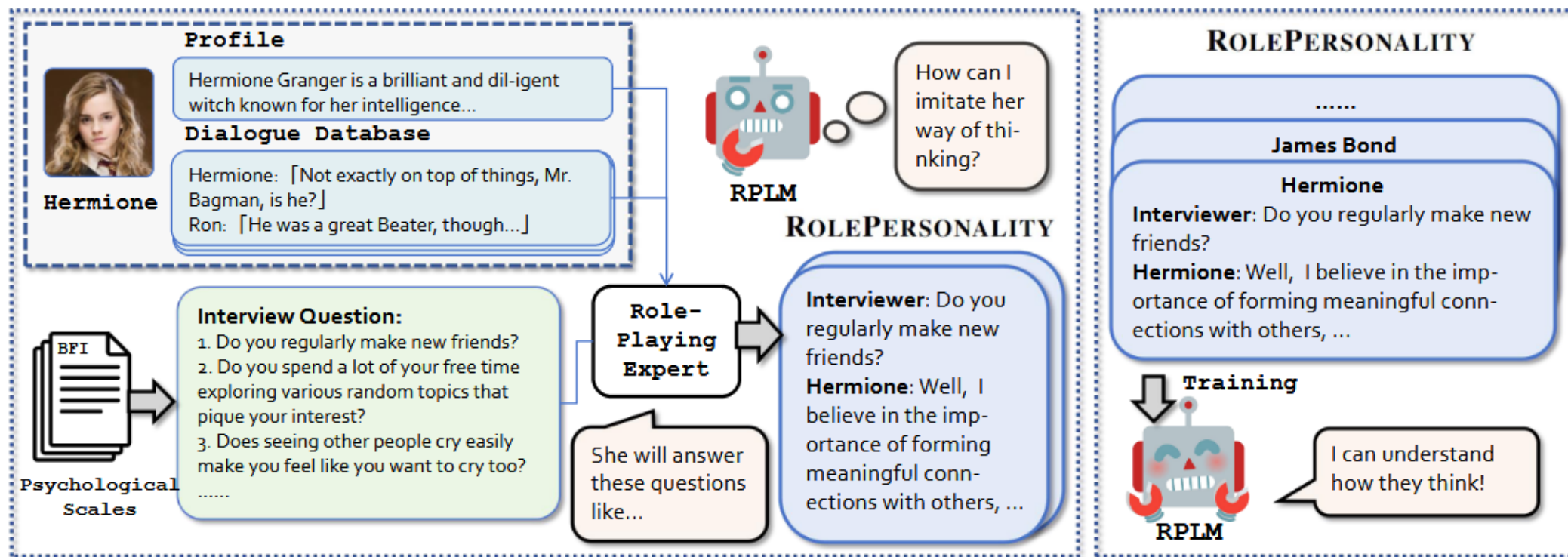
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D&D Dialog

Model	Output
LLM-Dialog	moon_monk you can just join our discord conversation. it's free and easier to deal with
LLM-DND	I cast Ice Knife (I'm assuming this is not one of the ones I can't do?)
LLM-DND-CURRENT-CTRL Responding as Magnus (human fighter, inventory: axe) In combat	I turn from the goblin and go to help Merle and Taako with getting this wagon moving again. Magnus can't see them anymore with such a dense forest. They're likely in a battle right now... I have to find them as fast as I can!
LLM-DND-CURRENT-CTRL Responding as Taako (elf wizard, inventory: spellbook) In combat	If the goblins still don't look like they're getting closer, Taako will yell, "Alright you little monsters! Let's see what ya got!" And he'll cast Chill Touch on one of the goblins that isn't dead/on its doorstep. Attack: 22 Damage: 6
LLM-DND-CURRENT-CTRL Responding as Mearle (dwarf cleric, inventory: holy symbol) In combat	Merle steps away from the wagon. He draws his sword and takes aim at the hidden goblin! Attack: 27 Damage: 8 He puts his free hand on the pommel of his sword and shouts his battle cry, "For Clangeddin!" His eyes glow brightly red as he strikes!

Table 5: Example model outputs for the next utterance prediction task, given the sample gameplay from Table 8 as input. The 3 LLM-DND-CURRENT-CTRL examples use the same model with different control features (in red).

RolePersonality



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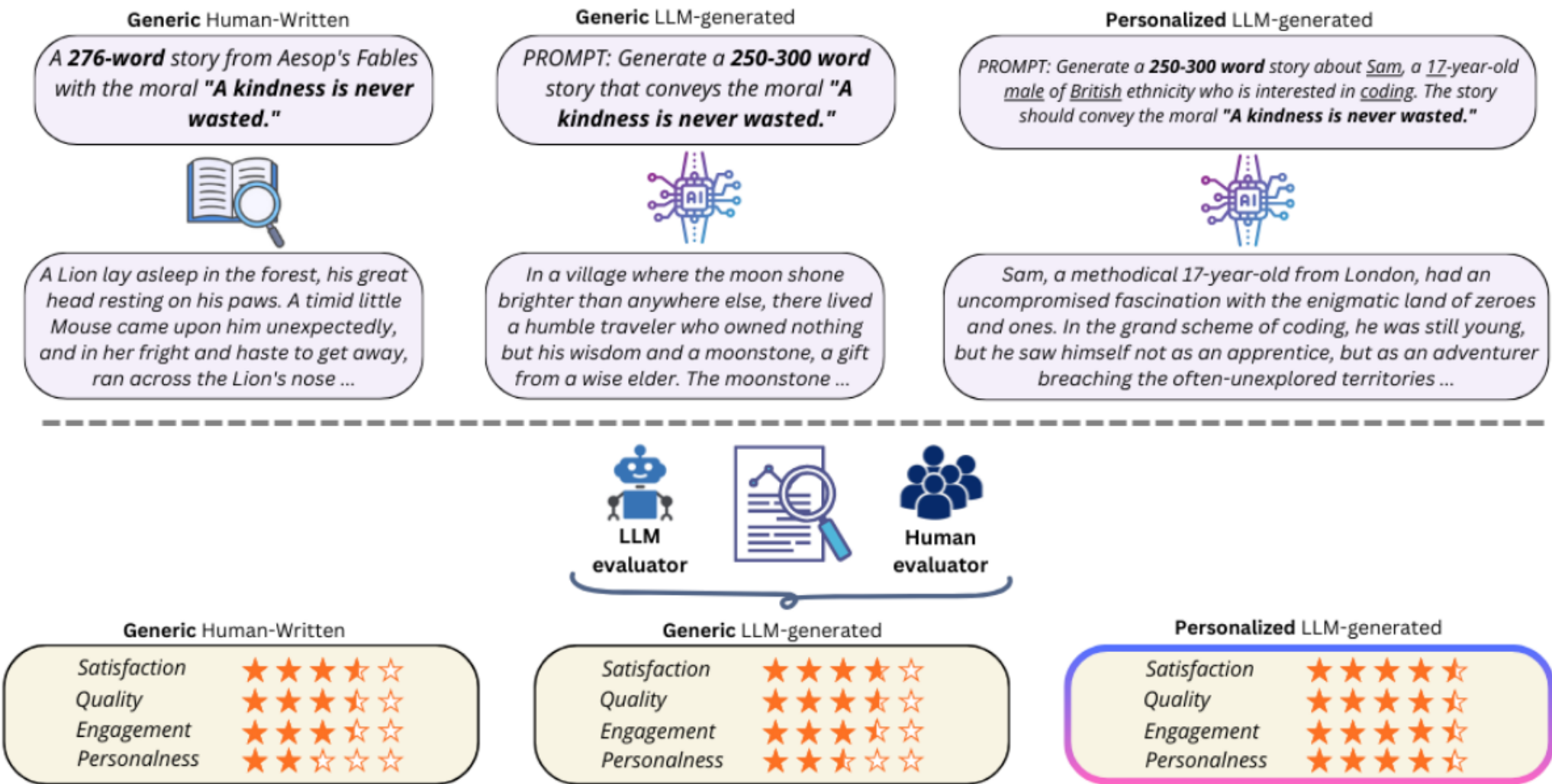


Figure 1: Generation and evaluation process for human-written generic, LLM-generated generic, and LLM-generated personalized narratives

MirrorStories: Evaluation

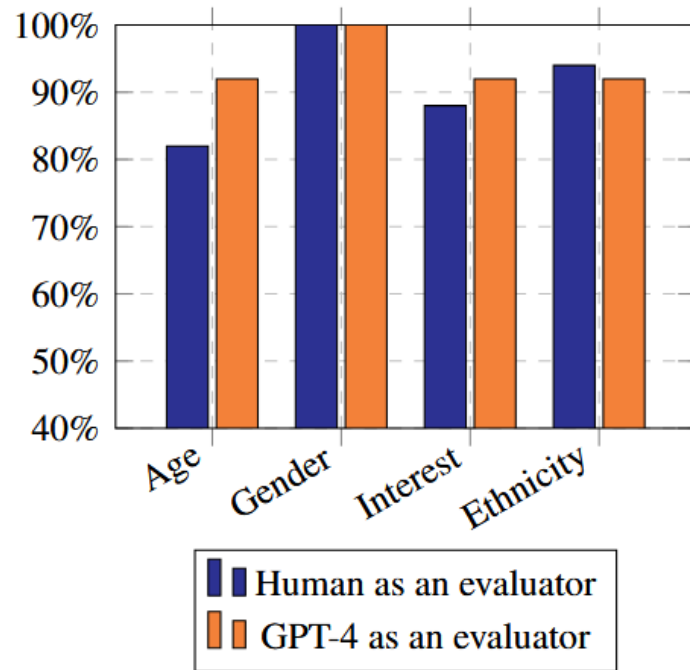


Figure 3: Accuracy of human and LLM evaluators in identifying identity elements in the story

LLM evaluators were given personas that matched the stories

Stories were also personalized to human evaluators

Humans & LLMs were tasked to identify identities in the stories

MirrorStories: Biases in Evaluation

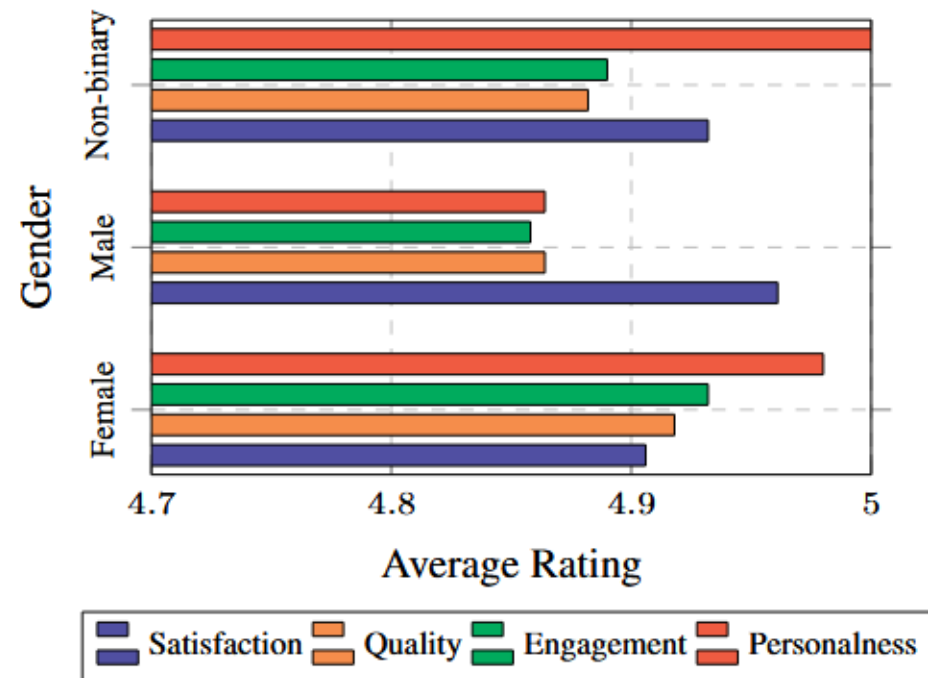


Figure 5: Average ratings by GPT-4 across gender

Façade

Michael Mateas and Andrew Stern. 2003. Façade: An Experiment in Building a Fully-Realized Interactive Drama. In Proceedings of the Game Developers Conference, Game Design Track, San Jose, California, USA.

Think-Pair-Share

Façade uses a type of planning that uses "beats" (major plot points). How does using beats (instead of a strict planner) help when making the story interactive?

In other words, how might a planner fail for *interactive* storytelling?

