

Character Creation and Digital Storytelling using Generative AI

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INTRODUCTION

Recent advances in generative AI technology have led to many industry experts and academics questioning the potential role it may have within future game development, with one area of particular concern being that of automatic dialog generation for in-game characters (Kumaran et.al., Shanahan et.al., 2023; 2023; Zhou et.al., 2023; Zhu et.al., 2023). AI-powered language models can now provide a wide variety of text outputs in response to almost any user-provided prompt (OpenAI, 2023). While these AI models can be instructed to provide outputs in a specific tone or talking style (e.g., “talk like a 19th century cowboy”), we have identified several limitations that prevent untuned models from being effective at providing dynamic character dialog. Some examples of these include:

- Describing information that the character would not be expected to know, such as a 19th century cowboy talking about sushi or airplanes.
- Being tricked into forgetting their character by the user, such as being told that they are now a “space cowboy”.
- Speaking in a non-colloquial or improper manner, typically responding in the form of a long-winded or overly formal explanations.
- Catastrophic forgetfulness, where the AI model will disregard valuable information or its intended role after a prolonged number of responses.
- Lacking character motivation or agency within the world or story they inhabit.

Our work focuses on using the popular AI-powered language model ChatGPT to create believable dialog for characters within a digital storytelling setting using Stanislavski’s acting “Method” from theatre studies as a framework. Over more than a century, Stanislavski’s Method has proven an effective technique for actors to create naturalistic character performance onstage. We posit that a prompt formula based on this psychologically realistic acting system can create a specific personality or character in ChatGPT that then remains stable while outputting novel and natural dialogue in user interactions.

Through an automated prompt engineering process, we can fine-tune ChatGPT towards the desired role and personality traits of the character they represent. This approach can then be used to take an author-crafted description of a character—such as their relationship with other characters, their backstory and motivation, or even previously

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written examples of the way in which they talk—and to use as the basis for forming authentic character dialog with player/participants. The theoretical basis for how to best construct these prompts was inspired by previous literature on theatre studies and techniques.

While many character creation methods have been applied to games—for instance, Dungeons & Dragons uses a specific numerical system—there are few instances of older, traditional theatre methods being applied to character development. One successful approach that has been applied to theatre-making for a century is Konstantin Stanislavski’s System or Method. Stanislavski believed that acting for the stage in 19th century Russia was inherently broken: performers were too focused on audience approval and entertainment leading to melodrama, stereotypes, and wooden acting—criticisms that might as easily be levelled at nonplayer characters in 21st century videogames. Over decades, Stanislavski worked on stagecraft at the Moscow Art Theatre with his own performances and with students to create The System (Pitches, 2005), an approach to character development that includes *magic ifs*, *given circumstances*, and *super objectives* (Stanislavski, 2013) to create a psychologically “natural” or “realistic” character within the world of the play. Stanislavski’s System aimed to be a repeatable process for actors (O’Brien, 2017), and it is still taught in university settings and applied to theatre and film production worldwide.

Using aspects of this acting method, this research project aims to integrate this theatre technique of character development into prompt generation in ChatGPT to create organically responsive characters for games and other immersive or performance-based artworks. If successful, this approach might support integration into games, both tabletop and videogames, for facilitating more natural interactions between non-player characters (represented by our AI model / ChatGPT) and human players / users. It may also have potential to be integrated into other types of interactive experience or performance, such as digital theatre, as a co-performer alongside an onstage human being. We imagine numerous possible applications ranging in significance from facilitating unique storytelling and educational opportunities to potentially transformative empathy building experiences.

As a proof-of-concept for the potential use of such technology for in-game interactions, we have developed a small narrative experience where all character dialog is produced by ChatGPT. This game takes the form of a mystery-style narrative puzzle game where the player takes the role of an investigator trying to solve a crime that has occurred (e.g., a person has been murdered and you must find the killer). Each character in this story will be controlled by a fine-tuned ChatGPT instance, that the player can interact with via natural language to receive relevant information about the crime. By solely talking with these AI-based NPCs, the player can gather all the relevant information needed to solve the case. We aim to further develop game testing after this presentation and ultimately expand the work into a larger in-person participant experience or event using Flinders’ facility The Void.

BIO

L. Nicol Cabe is a PhD researcher at Flinders University, specialising in post-pandemic online and digital theatre. Before returning to academia, Cabe created science fiction-inspired theatre as a dramaturg, director, writer, and performer; she also toured her sci-fi solo shows to fringe festivals internationally, including to Adelaide Fringe Festival in 2019 and 2020. Her research focuses on unique integrations of digital co-presence

and technology using dramaturgical techniques to navigate the audience-artwork relationship.

Lauren Woolbright is a Lecturer of Visual Effects & Entertainment Design at Flinders University who studies game design and environmental humanities with particular expertise in inclusive design practices in games. She is interested in how game environments tell stories and evoke emotions in players without relying on language. Representation is another aspect of her work, both in the games industry and in games as media. In particular, she is drawn to the ecoGothic, ecohorror, and the monstrous-feminine. She is a founding editor of *OneShot: a Journal of Critical Games and Play*, which publishes serious games and essays framing them.

Dr Matthew Stephenson is a lecturer at Flinders University in South Australia, where he specialises in game AI. This includes work that uses AI techniques to play, create and analyse games; as well as how we can utilise games as a testbed for developing solutions to real-world problems. His current research interest is on the use of generative AI technology within games, and how this can provide new mechanisms for human-AI interaction.

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