THEaiTRE: Automatically generating theatre play scripts[*]

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Abstract

In February 2021, we staged the first theatre play for which 90% of the script was automatically generated by an artificial intelligence system. The THEaiTRobot system is based on the GPT-2 language model, created by the OpenAI consortium, complemented with automated translation. We had to adapt the model in various ways, especially to avoid repetitiveness and forgetting of context, and to stick to a limited set of characters. As input for the system, we used short starting prompts (scene setting and first few lines of dialogue), prepared by a dramaturge, which were expanded into full scenes by THEaiTRobot. The script was then post-edited and put on stage. Reviews mostly noted that AI cannot really write a good play (yet), but acknowledged that the performance was mostly interesting and entertaining to watch. We faced numerous limitations with our approach. We could only generate individual scenes independently, with a limited number of characters, and with the character personalities often randomly switching and merging. Also, the system does not see beyond the text of the script, lacking the understanding of the relation of the script to what is happening on stage. We are currently working on a new version of the system, which should improve on some of the issues, while also further minimizing the amount of human influence. It should also incorporate the concept of dramatic situations into the generation process. The THEaiTRE project is related to other similar attempts, such as the play Lifestyle of the Richard and Family, the musical Beyond the Fence, the short movie Sunspring, or the performances of the Improbotics theatre group, all of which use automatically generated content to some extent. Our play stands out among these projects by being rather long (60 minutes) while having a very high proportion of automatically generated content (90%).

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