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Rolling the Dice:



Generative AI as a Dungeons & Dragons storytelling companion

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What is D&D?

A BREAK FROM TRADITIONAL STORYTELLING



But what's wrong?

TAKING A LOOK AT IMMERSION & USABILITY



[1] Reinikainen, A. (2008). Role-playing Games and Usability – The Effects of Design on the Experience of Play.
<https://trepo.tuni.fi/handle/10024/79214>



Can AI help?

STORYTELLING & GENERATIVE AI

Tricks of the Trade

SOME OF THE TOOLS THAT ARE CURRENTLY OUT THERE



STORYTELLING AI

Generates engaging narratives with visual illustrations using minimal user inputs & prompts. [2]



WORDCRAFT

Provides a text editor where users collaborate with a generative LM to write a story. [3]



BUNCHO [4]

A Japanese novel cocreation AI interface that generate novel titles and synopses using GPT-2. [4]

[2] Fotedar, S., Vannisselroij, K., Khalil, S., & Ploeg, B. (2020). Storytelling AI: A Generative Approach to Story Narration. *AI4Narratives@IJCAI*. <https://www.semanticscholar.org/paper/Storytelling-AI%3A-A-Generative-Approach-to-Story-Fotedar-Vannisselroij/d78090bdac690c1254ef1725c1c8330dbc76a27a>

[3] Yuan, A., Coenen, A., Reif, E., & Ippolito, D. (2022). Wordcraft: Story Writing With Large Language Models. *27th International Conference on Intelligent User Interfaces*, 841–852. <https://doi.org/10.1145/3490099.3511105>

[4] Osone, H., Lu, J.-L., & Ochiai, Y. (2021). BunCho: AI Supported Story Co-Creation via Unsupervised Multitask Learning to Increase Writers' Creativity in Japanese.

Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems, 1–10. <https://doi.org/10.1145/3411763.3450391>

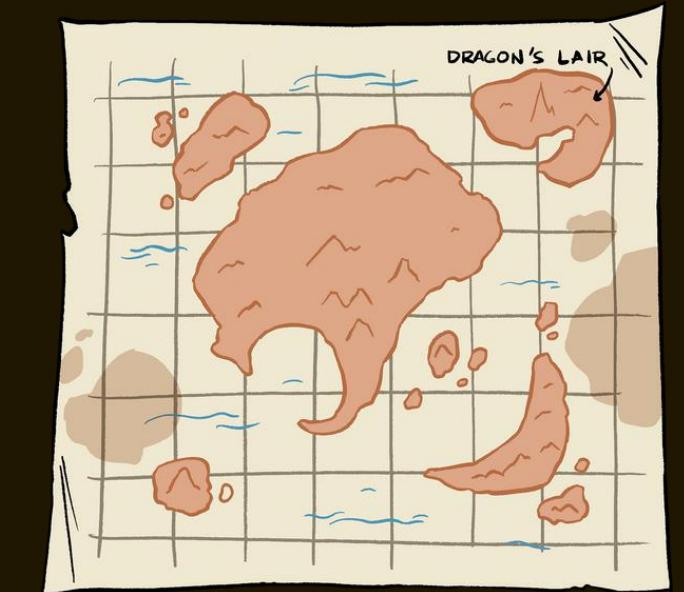
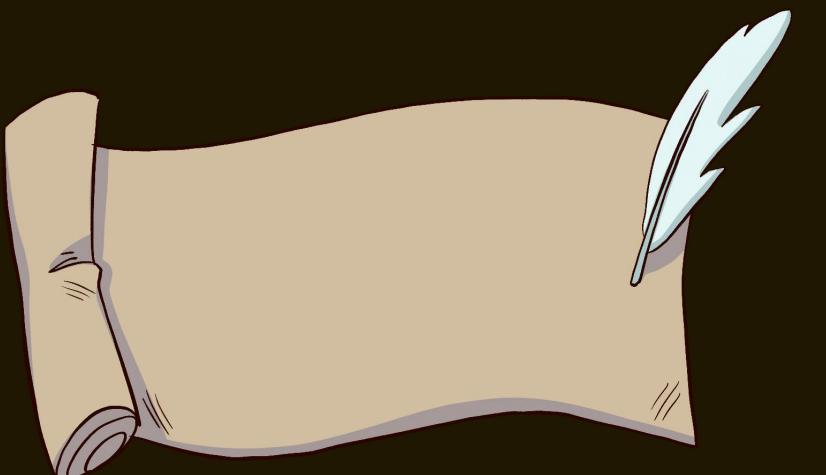
Tricks of the Trade

SOME OF THE TOOLS THAT ARE CURRENTLY OUT THERE



TEXT-TO-TEXT [5]

Generate narrative text that follows a cohesive story directed by the DM



TEXT-TO-IMAGE [6]

Integrate themes from a diverse collection of media to reduce predictable narratives.



[5] Brown, T., Mann, B., Ryder, N., Subbiah, M., Kaplan, J. D., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Askell, A., Agarwal, S., Herbert-Voss, A., Krueger, G., Henighan, T., Child, R., Ramesh, A., Ziegler, D., Wu, J., Winter, C., ... Amodei, D. (2020).

Language Models are Few-Shot Learners. Advances in Neural Information Processing Systems, 33, 1877–1901. <https://proceedings.neurips.cc/paper/2020/hash/1457c0d6bfcb4967418bfb8ac142f64a-Abstract.html>

[6] Ramesh, A., Pavlov, M., Goh, G., Gray, S., Voss, C., Radford, A., Chen, M., & Sutskever, I. (2021). Zero-Shot Text-to-Image Generation (arXiv:2102.12092). arXiv. <https://doi.org/10.48550/arXiv.2102.12092>



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How can Gen AI enhance the creativity and flexibility of D&D storytelling?





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D&D Scenarios

~ AND HOW AN AI COMPANION CAN HELP ~

1ST SCENARIO

WHERE IT BEGINS...

2ND SCENARIO

CONTINUING WHERE YOU LAST LEFT...

3RD SCENARIO

HERE WE GO AGAIN...



Continuing where you last left..

Problem: The dungeon master creates a vision of a merchant capital but struggles to come up with diverse names and personalities for each merchant.

PROMPT 2: "CAN YOU GIVE ME MERCHANTS WITH THEIR OWN PERSONALITIES FROM THE MERCHANT CAPITAL IN MY D&D CAMPAIGN?"



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Design Guidelines

- HOW CAN WE MAKE THEM BETTER? -

1 Understanding
the Context

2 Putting Value into
Inspirations

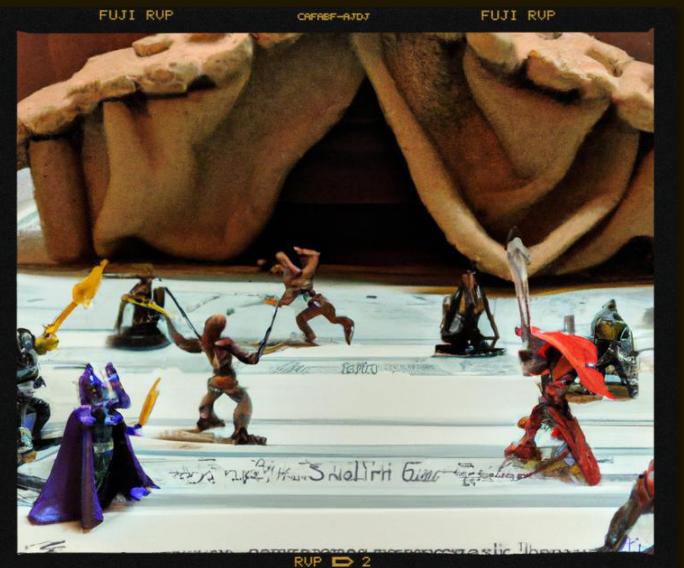
3 Maximizing
Engagement



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Putting Value into Inspirations



Using LMs to integrate themes from a diverse collection of media can reduce predictable narratives in D&D.



Diversity & inclusion can be improved by having a diverse repertoire of literary works when training the model.



Consider potential organic inspiration (e.g. emotion encoding) for a better overall narrative experience in D&D.



Conclusion

REFLECT ON THE USER, NOT THE TOOL



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