

ChatGPT and Metaverse

Public Side Meeting at IETF 116

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How ChatGPT is related to Metaverse

Thanks to recent developments in AI, a future in which users will be able to create their own immersive worlds may be possible.

- Three text-to-3D generators were already announced: GET3D from Nvidia, Make-a-Video from Meta and DreamFusion from Google.
- Metaverse builders are already using text generators like ChatGPT and visual generators like DALL-E to ideate new worlds and designs.

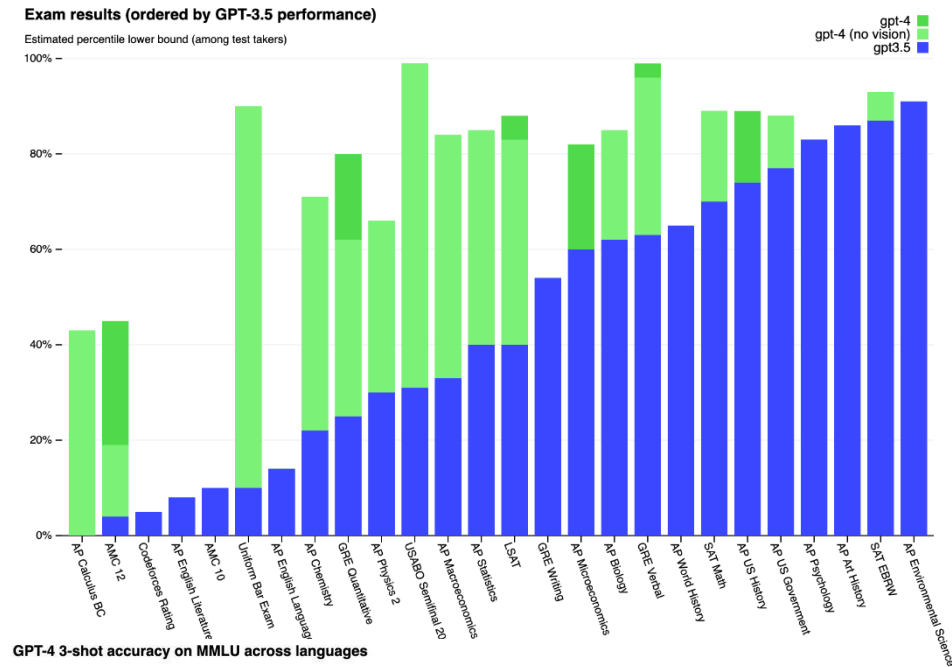
Therefore, the new AI technologies will be crucial toward building virtual worlds that are detail-rich and customizable.

- AI services, like **ChatGPT**, are having a relevant impact on **Metaverse creation** in particular:
 - › **Virtual worlds** must be filled with rich detail in their landscapes, objects and architecture. AI can help to build those surroundings much faster than a human can do.
 - › **Virtual people** populate the Metaverses and these sorts of AI characters can serve in the virtual worlds as guides, quest companions, nemeses, and so on.

GPT-4 vs GPT-3.5 (ChatGPT) released on Pi-day (14 of March)

GPT-4 tech details are a very hidden secret yet.

- Training Data Set is finished on September 2021, Model is finished in August 2022, additional 8 months it was “tuned for security”
- The size looks comparable (not much more than 175B of parameters) because the API cost of just 1.5x; rumors about 1T are probably wrong. It is more about optimization. The bigger model needs a bigger training data set which is expensive
- The context is much bigger 32k vs 4k; it is about 25k English words or 50 pages
- Multimodal on input (text and image)
- Image understanding capabilities are greatly improved than many specialized models before
- Considerable improvement (55%) in the programmability skills
- Considerable improvement (30% compared to average humans) in passing tests
- Considerable improvement in translation (85.5% accuracy on English, other 26 languages are close)
- The model is capable to use knowledge from different languages to answer (if the knowledge base is small for the language)
- Possibility to play different personality



GPT-4 3-shot accuracy on MMLU across languages

