

# A detailed comparison among 3D AI generators

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## Abstract

This short article lists off some advantages and disadvantages of 3D generators in speed, quality, quantity and compatibility.

## 1 comparison

- Introduction of 4 indicators
  1. Speed: Generation time.
  2. Quality: Image resolution and texture details.
  3. Quantity: Diversity and richness.
  4. Compatibility: Different formats can be converted to each other and be easy to edit.

Generators	Speed	Quality	Quantity	Compatibility
Text-3D	Fast In 1 minute	High 4k availble	Small Lack of 3D data-set	Good Editable
Text-2D-3D	Slow Costly NeRF computations	Low Rough	Big Enormous 2D image data	Poor NeRF conversion

Table 1: The Comparison of Generators[1]

## 2 Conclusion

The text-3D basically guarantees quality and speed, but in terms of richness, the lack of 3D data has led to an obvious shortcoming. The subsequent focus on the development of the direction is to independently collect or open-source share more scenes, types of 3D data richness, and gradually improve the richness. The 2D-3D inherits the richness of 2D image generation but is slightly weaker in quality and compatibility. However, models like One-2-3-45, which pursue the ultimate in generation speed, have emerged, and the quality and speed of generation are constantly improving[1].

## References

- [1] Zheng,X. Generative 3D: Waiting for the Next 'Midjourney Moment' in Chinese. (<https://mp.weixin.qq.com/s/vWvRauTmKAHMSRLy7UhwYA>, 2023)