

## AI-Generated Images and Analysis

**Introduction:** Recently, I came across an interesting post claiming that AI struggles to generate images of wine glasses filled to the brim, as such images are scarce or nonexistent on the internet. The post discussed how AI models rely on existing datasets for training and cannot generate what they have never "seen" before. Intrigued, I decided to test this hypothesis using different AI image generation tools.

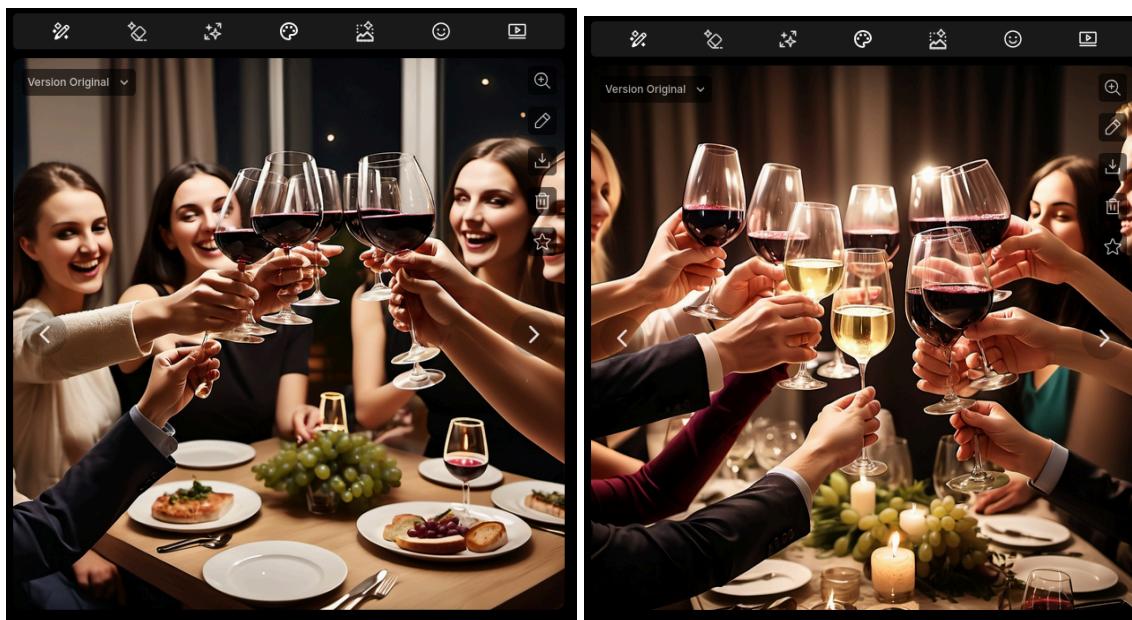
**Models used:** DALL·E, Deep Dream, RunwayML

**Prompt:** "Lively evening party with guest raising their fully filled wine glasses for a toast"

**Results:**

### DALL·E

The glasses were not completely filled, but the model attempted to generate realistic human figures. From a distance, the people in the image looked acceptable, though almost too flawless. On closer inspection, some facial expressions appeared unnatural, revealing subtle distortions. The focus was more on the glasses coming together for a toast rather than the individuals holding them.



### Deep Dream

The wine glasses were not completely filled, and the emphasis was on the people rather than the glasses. From afar, the image appeared coherent, but a closer look revealed inconsistencies. Some glasses had distorted shapes, especially in areas where they overlapped with other elements. Transparency seemed to cause issues, leading to unnatural layering effects.



### Runway ML

The model also failed to generate fully filled wine glasses but prioritized them over other elements. The people in the background were blurred, shifting the focus entirely to the glasses. The intricate details of the glasses were well-rendered, but there were inconsistencies in how they were held. In one image, a glass appeared to be floating in the air, highlighting a failure in physical realism.



**Refining the prompt:** Since none of the models generated fully filled glasses, I modified the prompt to be more explicit:

**Updated prompt:** “Lively evening party with guest raising their fully filled wine glasses(filled to brim) for a toast”

**Updated results:**



Even with this added specificity, the models still failed to depict completely filled glasses. Other features remained consistent with the previous results.

**Conclusion:** The inability of AI models to generate wine glasses filled to the brim highlights a key limitation: they rely entirely on existing datasets. If no reference images exist in their training data, they struggle to generate them accurately.

#### Key Observations on Model Priorities:

- **RunwayML** prioritized the wine glasses but sacrificed realism in other elements, even causing objects to float.
- **DALL·E** attempted a balanced approach but did not enforce prioritization as strongly.

- **Deep Dream** took the prompt at face value without adjusting priorities, leading to a more generic result.

From a distance, all images seemed convincing, but closer inspection revealed missing intricate details or elements that defied real-world logic. This experiment reinforces the idea that AI image generation remains constrained by its training data and has difficulty creating entirely new concepts that lack reference material.