

**Morph3D a tool
that uses Tripo and
OpenAI to generate
3D models from
text prompts in a
browser.**

Technology Impact Cycle Tool

Morph3D a tool that uses Tripo and OpenAI to generate 3D models from text prompts in a browser.

Morph3D allows users to input a short prompt and receive a generated .glb 3D model. It combines AI-driven prompt enhancement and Tripo's 3D generation API. The tool is fast, browser-based, and made for creative prototyping.

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Context of use: Education
Level of education: Bachelor

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Impact on society

What impact is expected from your technology?

This category is only partial filled.

What is exactly the problem? Is it really a problem? Are you sure?

Creating 3D models traditionally requires technical skills, expensive software, and time-consuming workflows. This limits accessibility for designers, students, and creative individuals who want to prototype or visualize concepts quickly. Morph3D lowers this barrier by allowing users to describe an idea in natural language and instantly receive a usable 3D model. This problem is real and widely acknowledged in creative and educational domains, where 3D content is increasingly important.

Are you sure that this technology is solving the RIGHT problem?

This question has not been answered yet.

How is this technology going to solve the problem?

This question has not been answered yet.

What negative effects do you expect from this technology?

This question has not been answered yet.

In what way is this technology contributing to a world you want to live in?

This question has not been answered yet.

Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements would you like to make to the technology? List them below.

This question has not been answered yet.

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Hateful and criminal actors

What can bad actors do with your technology?

This category is only partial filled.

In which way can the technology be used to break the law or avoid the consequences of breaking the law?

While Morph3D does not intentionally support unlawful behavior, it could be misused to create 3D models of copyrighted or restricted objects, or to generate inappropriate or offensive models. Furthermore, bad actors could embed malicious content into models and use them in phishing or impersonation. The backend relies on Tripo's filtering to mitigate such misuse.

Can fakers, thieves or scammers abuse the technology?

This question has not been answered yet.

Can the technology be used against certain (ethnic) groups or (social) classes?

This question has not been answered yet.

In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.

This question has not been answered yet.

How could bad actors use this technology to subvert or attack the truth?

This question has not been answered yet.

Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Privacy

Are you considering the privacy & personal data of the users of your technology?

This category is only partial filled.

Does the technology register personal data? If yes, what personal data?

No personal data is collected by Morph3D. The system only uses non-identifiable prompt text input for processing via OpenAI and Tripo APIs. No account system or tracking is implemented. However, indirect profiling may be possible via third-party APIs if used outside GDPR-regulated environments.

Do you think the technology invades the privacy of the stakeholders? If yes, in what way?

This question has not been answered yet.

Is the technology is compliant with prevailing privacy and data protection law? Can you indicate why?

This question has not been answered yet.

Does the technology mitigate privacy and data protection risks/concerns (privacy by design)? Please indicate how.

This question has not been answered yet.

In which way can you imagine a future impact of the collection of personal data?

This question has not been answered yet.

Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.

This question has not been answered yet.

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Human values

How does the technology affect your human values?

This category is only partial filled.

How is the identity of the (intended) users affected by the technology?

Morph3D empowers users to create digital assets easily, which can enhance their identity as designers or creators. It fosters creativity, accessibility, and personal expression. It does not impose a worldview, but the use of styles (e.g., "Barbie", "Venom") might carry aesthetic biases. Users are not stigmatized, and the technology aligns with a creative, futuristic identity.

How does the technology influence the users' autonomy?

This question has not been answered yet.

What is the effect of the technology on the health and/or well-being of users?

This question has not been answered yet.

Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make to the technology? List them below.

This question has not been answered yet.

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Stakeholders

Have you considered all stakeholders?

This category is only partial filled.

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by answering these questions.

Name of the stakeholder

Students in multimedia or game design

How is this stakeholder affected?

-

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

No

Name of the stakeholder

Hobbyist 3D creators

How is this stakeholder affected?

-

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

No

Name of the stakeholder

Indie game developers

How is this stakeholder affected?

-

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

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No

Name of the stakeholder

Educators using 3D models in STEM/art subjects

How is this stakeholder affected?

-

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

No

Name of the stakeholder

AI researchers or rapid prototyping teams Less direct stakeholders:

How is this stakeholder affected?

-

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

No

Name of the stakeholder

Tripo API and OpenAI API providers

How is this stakeholder affected?

-

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

No

Name of the stakeholder

Teachers grading AI projects

How is this stakeholder affected?

-

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Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

No

Name of the stakeholder

3D content distribution platforms

How is this stakeholder affected?

-

Did you consult the stakeholder?

No

Are you going to take this stakeholder into account?

No

Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?

-

Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.

This question has not been answered yet.

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Data

Is data in your technology properly used?

This category is only partial filled.

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?

Yes. Prompt-based generation is prone to ambiguity and hallucination. The enhanced prompts (via GPT-3.5) might inject unintended biases or assumptions. Moreover, the underlying models (Tripo/OpenAI) are trained on large datasets that may carry historical, cultural, or representational biases.

How does the technology organize continuous improvement when it comes to the use of data?

This question has not been answered yet.

How will the technology keep the insights that it identifies with data sustainable over time?

This question has not been answered yet.

In what way do you consider the fact that data is collected from the users?

This question has not been answered yet.

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Inclusivity

Is your technology fair for everyone?

This category is only partial filled.

Will everyone have access to the technology?

This question has not been answered yet.

Does this technology have a built-in bias?

Yes, in some form. The quality and style of the generated models are influenced by the training data of Tripo's 3D model generator. Certain object types or cultural elements may be more represented than others, potentially leading to underrepresentation or stereotyping in less common prompts.

Does this technology make automatic decisions and how do you account for them?

This question has not been answered yet.

Is everyone benefitting from the technology or only a a small group?

Do you see this as a problem? Why/why not?

This question has not been answered yet.

Does the team that creates the technology represent the diversity of our society?

This question has not been answered yet.

Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Transparency

Are you transparent about how your technology works?

This category is only partial filled.

Is it explained to the users/stakeholders how the technology works and how the business model works?

The README and UI make it clear that Morph3D uses Tripo for model generation and OpenAI for prompt enhancement. No commercial model is implemented in the prototype, and API usage is done transparently via environment variables. Further improvements could include in-app documentation or tooltips.

If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?

This question has not been answered yet.

Is it possible to file a complaint or ask questions/get answers about this technology?

This question has not been answered yet.

Is the technology (company) clear about possible negative consequences or shortcomings of the technology?

This question has not been answered yet.

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Sustainability

Is your technology environmentally sustainable?

This category is only partial filled.

In what way is the direct and indirect energy use of this technology taken into account?

The application itself runs locally in a browser, consuming minimal client-side resources. However, the backend relies on cloud-based APIs that incur computational cost. The use of enhanced prompts slightly increases API calls, but these are optimized by avoiding duplicate generations. Tripo and OpenAI run on high-performance data centers, so efficiency depends on their infrastructure.

Do you think alternative materials could have been considered in the technology?

This question has not been answered yet.

Do you think the lifespan of the technology is realistic?

This question has not been answered yet.

What is the hidden impact of the technology in the whole chain?

This question has not been answered yet.

Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Future

Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?

If adopted widely, Morph3D or similar tools could democratize 3D content creation, impacting fields like education, game development, AR/VR, and design. However, it could also lead to over-saturation of low-quality 3D models or raise ethical issues regarding automated content generation (deepfakes, IP theft, etc.). Strong moderation, transparency, and creative attribution will be crucial as such tools scale.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one utopian scenario.

This question has not been answered yet.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one dystopian scenario.

This question has not been answered yet.

Would you like to live in one of this scenario's? Why? Why not?

This question has not been answered yet.

What happens if the technology (which you have thought of as ethically well-considered) is bought or taken over by another party?

This question has not been answered yet.

Impact Improvement: Now that you have thought hard about the future impact of the technology, what improvements would you like to make? List them below.

This question has not been answered yet.