QUICKSCAN - CANVAS 2D Images to 3D Models (Photogrammetry)

NAME: 2D Images to 3D Models (Photogrammetry)
DATE: September 5, 2024 3:32 AM

DESCRIPTION OF TECHNOLOGY
ComfyUI for creating high-quality photorealistic 3D models from 2D images

HUMAN VALUES

The technology empowers users by providing them with tools to create high-quality visual content more efficiently. This can enhance their professional identity and reputation.
It fosters new ways for Users can perform tasks traditionally done by photographers and graphic designers, potentially shifting their professional roles and reducing the need for specialized skills in these areas.

TRANSPARENCY

Detailed documentation explaining the functionality and underlying algorithms. Easy-to-understand guides and tutorials for end-users.Clear communication about how data is used and monetized, ensuring user trust and understanding.

IMPACT ON SOCIETY

The main problem this technology aims to solve is the high cost and environmental impact of traditional product photography. Yes, it is a substantial problem for businesses that rely heavily on product imagery for advertising and e-commerce. Traditional methods are time-consuming, resource-intensive, and often inflexible in responding to rapid market changes. This makes the process more efficient and environmentally friendly, benefiting both businesses and the planet.

STAKEHOLDERS

- Advertisement Agencies
- E-commerce Business
- Graphic Designers & Content Creators
- Consumers
- Investors
- Technology Developers

SUSTAINABILITY

Algorithms should be optimized for energy efficiency. Use of energy-efficient hardware and infrastructure. Incorporating renewable energy sources where feasible and minimizing computational overhead.

HATEFUL AND CRIMINAL ACTORS

The technology could be used to generate realistic but false images, potentially leading to fraud or misinformation.
Enhanced capabilities for creating realistic images might be misused to fabricate identities or impersonate individuals.
If personal data is involved, the technology could be used to infringe on individuals' privacy, especially if used without consent.

DATA

Data interpretation can vary, affecting model consistency. Data sets might lack diversity, impacting model generalizability. Historical biases in data can affect the fairness and accuracy of the AI models. Ensuring meaningful representation learning rather than spurious correlations is crucial. Employ diverse and comprehensive data sets. Regularly audit models for bias and performance issues. Implement robust data handling and processing protocols.

FUTURE

Could revolutionize the advertising and e-commerce industries by making high-quality visual content generation more accessible and efficient. Might lead to new norms in digital content creation, with a shift towards AI-generated visuals. Continuous improvements could introduce real-time 3D rendering and interactive content creation capabilities, further enhancing user experience and possibilities.

PRIVACY

The technology itself does not inherently register personal data. However, it processes images that could potentially include personal data if individuals are depicted. If images of people are used without proper consent, it could lead to privacy violations. Thus, it is crucial to ensure all data used is either non-personal or has obtained explicit consent from the individuals depicted.

INCLUSIVITY

Data Collection: Bias may arise from non-representative data sets, reflecting existing societal biases.Algorithmic Bias: If not carefully monitored, the algorithms could perpetuate biases present in the training. Regularly evaluate the models for biased outputs. Use diverse data sets to train models. Implement feedback mechanisms to continuously improve and correct biases.

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QUICKSCAN - CANVAS - HELP GUIDE 2D Images to 3D Models (Photogrammetry)

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HUMAN VALUES

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

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?…

TRANSPARENCY

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

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their…

IMPACT ON SOCIETY

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

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine…

STAKEHOLDERS

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by…

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.
…

SUSTAINABILITY

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

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

HATEFUL AND CRIMINAL ACTORS

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

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/ identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder…

DATA

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into…

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;…

FUTURE

What could possibly happen with this technology in the future?

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

PRIVACY

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

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like…

INCLUSIVITY

Does this technology have a built-in bias?

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases.…

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