AJ-Assist (Artificial Jockey Assistant)

AJ-Assist is an AI-driven tool designed for live audiovisual performers. It analyzes live music input to detect features like tempo, genre, and mood, and uses this information to generate real-time, dynamic visual suggestions. Through the integration of music analysis and AI-based image generation, AJ-Assist empowers VJs to create responsive and immersive visual experiences while maintaining full creative control.

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Context of use: Education
Level of education: Bachelor

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?

AJ-Assist tackles the challenge VJs face during unprepared, improvised performances: creating dynamic visuals that match the music without prior setup. Reacting live to unpredictable changes in tempo, genre or mood is mentally demanding and often leads to repetitive visuals. This tool eases that pressure by analyzing music in real time and suggesting fitting visuals, while keeping the VJ in creative control.

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.

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?

Although AJ-Assist is intended for artistic use, the system could be misused to generate offensive, misleading, or disturbing visuals in public or online performances. If not properly curated, visuals might unintentionally spread harmful content. The technology could also be exploited to mimic copyrighted visual styles or content without proper attribution.

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.

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?

AJ-Assist does not collect personal data, as it only analyzes audio input for musical features. No identifying information is required or stored.

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.

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?

AJ-Assist empowers VJs by enhancing their creative control and performance confidence. It introduces new ways of interacting with music, offering AI-generated visual suggestions in real time. Rather than replacing the VJs artistic role, it supports and expands it. The technology aligns with a performers identity as a creative and improvisational artist, without being stigmatizing or imposing.

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.

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
VJs and audiovisual performers

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
Event organizers / venues

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
Audience

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
Developers / designers of the tool

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
Music producers / DJs

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.

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?

The technology takes this into account by: 1) Treating genre and mood classification as probabilistic, not absolute, since music is culturally subjective and often hybrid in nature. 2) Avoiding over-reliance on single data points by using multiple features (tempo, timbre, rhythm) for visual generation. 3) Acknowledging bias in training datasets (e.g., genre models might be Western-centric), and planning to include human-in-the-loop design to retain artistic control.

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.

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, this technology likely contains built-in biases. The music analysis models (e.g., Essentia) and generative models (e.g., Stable Diffusion via StreamDiffusion) are trained on datasets that may reflect Western music norms and aesthetic preferences. This can lead to genre classifications or visual outputs that do not fairly represent non-Western or experimental music styles.

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.

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?

At this stage, the technology is still in development and does not have a finalized business model. However, transparency is a key goal. The user interface will clearly explain how the music analysis affects visual generation, and users (e.g., VJs) will be able to see and adjust the AIs suggestions. The system will provide insight into which musical features influenced the visual output (e.g., tempo, genre).

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.

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 technology currently relies on real-time audio analysis and image generation. These processes require significant computational resources, particularly for the visual output. Most of the processing is done locally, which avoids constant cloud usage but still depends on the capabilities of relatively powerful hardware.

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.

Future

Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?
In the future, as the technology scales and becomes more widely adopted, it could transform live performance cultures. With AI-generated visuals becoming more accessible and accurate, VJs and performers may rely more on automated systems to assist with real-time music-to-visual synchronization, potentially reducing the need for extensive preparation and creative input.

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.