

# Spotify

Spotify clone

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Created on: June 20, 2025 7:25 PM  
Changed on: June 20, 2025 7:36 PM

Context of use: Education  
Level of education: Bachelor

# Technology Impact Cycle Tool

Spotify

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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?**

The current music platforms are often limited in supporting diverse or AI-generated music content. This makes it harder for emerging or experimental creators to publish their work. A modern, flexible platform is needed to accommodate all music types in a more open and dynamic way.

### **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?**

Users could upload copyrighted music without proper licensing, or distribute harmful or offensive content disguised as music. The system could also be misused to bypass copyright detection if not properly moderated. Streaming AI-generated voices without consent could also violate privacy or likeness rights.

### **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?**

Yes, the platform registers usernames, email addresses, and user roles (such as artist or listener). It may also store uploaded song metadata and IP addresses for tracking access. All of this falls under GDPR and privacy compliance.

### **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?**

The platform empowers artists by giving them visibility and control over their work. It also allows users to express their musical taste and identity more freely. However, it could impact privacy or identity if accounts are misused or if public data is poorly protected.

### **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 has not been filled 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, we understand that data can be incomplete, biased, or misinterpreted. We ensure our system avoids relying too heavily on data-based assumptions (like popularity metrics), and we regularly review how we collect and present data to users.

### **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?

There is a potential for bias if the system prioritizes popular or mainstream content over niche genres or AI-generated music. This can be mitigated by using diverse training datasets and giving equal opportunity to different music types in recommendations.

### 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?**

Yes, users are informed that the platform uses cloud storage, streaming endpoints, and SAS tokens for secure access. The business model focuses on fair distribution for artists, with clear documentation and transparent policies for both listeners and contributors.

### **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 platform uses containerized services and serverless functions to scale efficiently, reducing unnecessary compute usage. Streaming and storage are optimized to prevent idle usage. However, there is always room for improvement by further reducing cloud resource consumption.

### **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?**

With mass adoption, this platform could change how people discover and interact with music, especially with the rise of AI-generated content. It could redefine artist identity, licensing models, and even challenge what we traditionally consider "music creation."

### **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.*