

# Movie Recommendation System

A model that predict which movies you might like using an algorithm that is trained on data based on what movies the viewer watched and how they rated the movie

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Context of use: Education  
Level of education: Bachelor

# Technology Impact Cycle Tool

Movie Recommendation System

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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?**

There are a lot of streaming platforms with a big variety of movies & shows so there's something for everyone and you always have something to watch. However, since there are so many options, users tend to spend too much time searching for movies to watch which can be irritating and time consuming while this time should be spend to relax. It's improving the user-friendliss rather than a serious societal problem.

### **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?**

The model itself only needs an user-id for personal information. The only personal information that will be used for the model, is the watch behaviour, genre and movie preferences. This information is not traceable to a person, their contact information, profession, address etc

## **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, the model itself doesn't need any personal information. Only preferences. Since these users need to log in and this might require a mail address, some personal data like name and mail address might be collected for this manner but not used in the database that the model will be using for these recommendations.

### **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?**

Users will spend less time searching for movies on multiple platforms. It's also a way of introducing movies & shows that aren't generally popular, but might be a good fit for this user because often the platforms recommend popular movies. It improves the user-friendliness.

### **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**

Streaming Platforms

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

Yes

**Are you going to take this stakeholder into account?**

Yes

**Name of the stakeholder**

User of movie streaming platform(s)

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

Yes

**Are you going to take this stakeholder into account?**

Yes

**Name of the stakeholder**

Cinemas

**How is this stakeholder affected?**

-

**Did you consult the stakeholder?**

Yes

**Are you going to take this stakeholder into account?**

Yes

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

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**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?**

In case a movie does not have the right data, there might still be enough other recommendations that can be made. The user will probably miss out a lot of good movies because there are so many of them. Besides, there are many labels we can assign to movies & shows. The technology will still work without these shortcomings.

### **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?

The bias can come from various sources such as the data used to train the system, the algorithm used to make recommendations, and the preferences of the creators of the model. Its important to note that bias in recommendation systems can lead to unfairness and discrimination and might not recommend movies with black leading actors or LGBTH+ subject because some people tend to avoid them.

## 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?**

Since it is a recommendation system, the user doesn't have to do a lot to get an output. The model needs to know their interests and what movies they liked and which streaming platforms they are currently using.

### **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?**

It needs some data capacity of the internet, but since people will save some time in searching for a movie, they might also save some energy because they are finished earlier.

### **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?**

The dataset the model uses for these predictions might be outdated very quick. The dataset has to be updated or the model has to find a way to search the internet to fill in the data by itself. Secondly, the movie industry might get more succesfull because people are using their watching time more efficiently.

### **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.*