# **IMPROVEMENTSCAN - CANVAS**

# Machine learning

NAME: Machine learning

**DATE:** May 2, 2025 11:55 PM

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#### **DESCRIPTION OF TECHNOLOGY**

Prediction of wine quality using various machine learning algorithms. The models will train on physio-chemical data derived from samples of wines to determine their quality level.

is even more important than physio-chemical data. I would

also like to add more data on the growing process (fertiliser

### **HUMAN VALUES**

I would make sure that there are clear disclaimers on the judgement of the model and make sure that there are no addicting factors in the application.

### **TRANSPARENCY**



I would author a white paper explaining the way data is collected and used in order to train the model, (even more extensive than the notebook for the challenge)

### **IMPACT ON SOCIETY**

used, pesticides used, etc.)



### **STAKEHOLDERS**

A disclaimer should be shown that the predictions are based purely on physio-chemical makeup, as long as that is the case.

### **SUSTAINABILITY**



I would make sure that the end users have a clear understanding of how the model works (on the surface level), and that a thorough, in-depth explanation of the inner workings of the model is not technically possible to give.

### HATEFUL AND CRIMINAL ACTORS

due to diverse testing groups and data sources.

and a method of countering it. Ideally it would not be possible



#### DATA

data.



### **FUTURE**



I would implement safe guards to make sure that people do not get dependent on the technology. I would also try to prevent misjudgements by the model causing a big impact in the industry.

### **PRIVACY**



#### I would make sure that subjective data is anonymised at the source.

### **INCLUSIVITY**



### I would make sure that the testing group is varied in all ways possible.

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# **IMPROVEMENTSCAN - CANVAS - HELPSIDE**

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#### **DESCRIPTION OF TECHNOLOGY**

Prediction of wine quality using various machine learning algorithms. The models will train on physio-chemical data derived from samples of wines to determine their quality level.

### **HUMAN VALUES**

Now that you have thought hard about the impact of your technology on human values, what improvements...

If you think about the impact of this technology on human values and needs. If you think about how this technology affects the identity of the user, the autonomy of the user (can the users make their own decisions?) and the health and well-being of the user. If you think about all that, what improvement would you (want to) make? In the technology?...

### TRANSPARENCY



Now that you have thought hard about the transparency of this technology, what improvements would you like t...

If you think about the communication on the way the technology works and the businessmodel. If you think about the explanation on automatic decisions that are made. If you think about complaint procedures and transparency on possible negative effects. If you think about all that, what would you (want to) improve? In the technology? In context?...

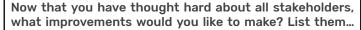
### **IMPACT ON SOCIETY**



Now that you have thought hard about the impact of this technology on society (by filling out the questions...

If you think about the real problem this technology is going to solve. If you think about the ability of this technology to solve the real problem. If you think about possible negative effects and whether this technology will contribute to a world you want to live in. If you think about all that, what improvements would you make? In technology? In context? In use?...

### **STAKEHOLDERS**



If you think about all stakeholders of this technology. If you think about stakeholders that are less obvious. If you think about the way certain stakeholders are affected by this technology and if you want to take them into consideration. If you think about all that, what would you (want to) improve? In the technology? In context? In use?...

### **SUSTAINABILITY**



Now that you have thought hard about the sustainability of this technology, what improvements would you like t...

If you think about the direct and indirect energy use and the materials that are used in the technology. If you think about the lifespan of the technology and the hidden environmental impact of the technology. If you think about all that, what improvements would you (want to) make? In the technology? In context? In use?...

### HATEFUL AND CRIMINAL ACTORS



Now that you have thought hard about how bad actors can impact this technology, what improvements would...

If you think about this technology being used to break the law, or avoid the consequences of breaking the law, or to be used against certain groups, or to attack the truth or to pit certain groups against each other. If you think about all of that, what improvements would you (want to) make? In the technology? In context? In use?...

### **DATA**



Now that you have thought hard about the impact of data on this technology, what improvements would you...

If you think about the limitations of data. Things like subjectivity, incomplete datasets and so on. If you think about the way new insights are handled. If you think about the sustainability of the collection of data or the data that is collected from the users. If you think about all that, what would you (want to) improve? In the technology? In context?...

### **FUTURE**



Impact Improvement: Now that you have thought hard about the future impact of the technology, what...

If you think about an utopian and a dystopian scenario. If you think about the way this technology can change the world. If you think about the consequences of a different party buying your technology. If you think about all that, what would you (want to) improve? In the technology? In context? In use?

### **PRIVACY**



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

If you think about this technology invading someone's privacy or collecting personal data and if you think about the way this technology is compliant with prevailing law and mitigates dataprotection risks and concerns. If you think about all that, what improvements would you (want to) make? In the technology? In context? In use?...

### **INCLUSIVITY**



Now that you have thought hard about the inclusivity of the technology, what improvements would you like to...

If you think about accessibility to this technology. If you think about built in biases or automatic decisions that may be biased. If you think about who is benefitting from this technology and the diversity of the team that creates the technology. If you think about all that, what improvements would you (want to) make? In the technology? In context? In...

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