



NAME: AI


DATE: May 15, 2026 5:32 PM

DESCRIPTION OF TECHNOLOGY
AI for Outlier Detection




HUMAN VALUES 


The tool aims to improve a bottleneck in the process of the validation engineers. And it could only be used as an advisor which propose a certain amount of data points as outliers.

TRANSPARENCY 


yes, the technology is meant to be very user friendly. The user should only upload the data which he is examining and the model will return all of the values that are marked as an outliers.

IMPACT ON SOCIETY 


The problem which this AI tool aims to solve is the lost of time which the validation Engineers in NXP waste to check every single data point by clicking tough multiple graphs and checking for any major outliers.

STAKEHOLDERS 


- Validation Engineers, Nijmegen
- Fontys assessors
- Other IVN employees

SUSTAINABILITY 


Due to the context of the project and the fact that the aim of the models is only to detect outliers from not so big datasets, I am confident to say that there won't be much energy consumption.

HATEFUL AND CRIMINAL ACTORS 


There is no possible way in which it could be used for that purpose, due to the fact that this tool is simply checking post-silicon validation data of prototypes.

DATA 


While I was doing the Data analysis for the AI solution, I found out multiple problems in my data such as it is hard for the engineers to provide me with data ,engineers don't have any way of marking a data point as an outlier. Other than that from the given data raw and clean I concluded that there were many data points which were removed because the engineer told the whole test as not good, which will confuse the AI. That is why I am planning to use unsupervised learning.

FUTURE 

Due to the fact that this tool is only focused to solve a certain bottleneck for a certain amount of stakeholders, I can say that there won't be any drastic increases of the users.

PRIVACY 

No, As mentioned previously the tool is using only validation data Chip prototypes.

INCLUSIVITY 

If the data is examined in detail, it will be found that there should be far fewer outliers than normal data, as engineers define an outlier as an abnormally high or low value. However, aside from this, there are no biases because the data is equally distributed across the different test requirements, with each test requirement having exactly the same number of samples.

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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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