



NAME: EV-Consumption Prediction 

DATE: May 1, 2024 7:00 PM

DESCRIPTION OF TECHNOLOGY
 This is an analysis of the EV-consumption prediction project. The project is about a machine-learning prediction model that can predict the amount of charge needed in an EV to travel a certain distance. The model analyzes the past data to be able to create a prediction for the amount of charge needed. The data retrieved from the vehicles is used locally to avoid any chance of online leaks.


HUMAN VALUES 

I could think of a few things :


Improved Accuracy and Reliability: Continuously refine the model to ensure more accurate and dependable predictions.

Inclusivity in Design: Ensure the technology is accessible and usable by a diverse range of users, regardless of their technical expertise.

Feedback Integration: Create a more effective system for...


TRANSPARENCY 

Enhance accuracy and adaptability to real-time data.
 Expand user guidelines for varying conditions.
 Implement a more robust feedback system.
 Increase environmental impact awareness in usage.


IMPACT ON SOCIETY 

One thing the project can use is to show how much benefit the user did to society and personally. They should be able to see the money they saved and the trees they planted(based on co2 reduction due to their driving behaviour). This could potentially trigger users to be better at saving resources and also saving money.


Another thing that might need to be regulated is that many people do not like using apps and do not like phones as well, such people of the society shall not be mis treated on the...

STAKEHOLDERS 


There is no such improvement that I can think of, it is an application that the users can use to predict the charge on the vehicle needed.

SUSTAINABILITY 

This technology has been refined multiple times while creating to use the least possible resources and be as fast as possible. At the current moment, I do not see a way of making it even better.

HATEFUL AND CRIMINAL ACTORS 


To mitigate the risks associated with bad actors impacting the electric vehicle charge prediction technology, several key improvements can be made. Strengthening user verification and access control measures can ensure that only authorized individuals have access to sensitive data. Enhanced data encryption and continuous monitoring bolster the security of the system against unauthorized access and misuse. Clear ethical use guidelines should be established. Regular engagement with user communities and compliance with...

DATA 

At the current moment, I cannot think of any substantial improvements, however, it would be a good idea to check the data before it is fed into the system, often broken sensors send bad data which is taken as correct data in the system since we never put a check and like to believe sensor data is correct and will stay correct.


However, a broken sensor sending incorrect data could substantially affect the model and prediction system.

one thing I could suggest is to put a check in the system to...


FUTURE 

I can improve the technology by feeding the model more data at the moment the data is limited and hence the capacities of the model. However, I would also like to increase the capacity of the model to be more vigilant during driving rather than giving the new range estimates which could also be not nice, the fluctuating predictions form the app.

I would prefer if the app could suggest ways to reach my destination at the suggested energy usage. For example, it could suggest lowering the temperature in the car by 5...

PRIVACY 

To enhance privacy and data protection in the electric vehicle charge prediction technology, several key improvements are recommended. First, strengthening data encryption is crucial to secure the transmission and storage of personal data. Implementing rigorous consent protocols will ensure that users are clearly informed and have agreed to the collection and processing of their data. Expanding user control over their data is also important, allowing them easy access to view, edit, or delete their personal information.

INCLUSIVITY 


To enhance the inclusivity of the electric vehicle charge prediction technology, several improvements can be made. Firstly, diversifying the data set to include various vehicle types, driving styles, and geographic areas will make the model more applicable to a broader range of users. Improving the user interface for accessibility and adding multilingual support will help accommodate users with different abilities and language preferences. Offering affordable versions of the technology can make it accessible to those with budget...

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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 


Now that you have thought hard about all stakeholders, what improvements would you like to make? List them...

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 use?...

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