Neural networks are a type of machine learning model. These models are based on our central nervous system. In a model there are nodes of information where the data may be for a brief time. The purpose of a Neural network is for a machine to be able to make choices that would be like our own human choices. (1)

There are three types of layers in a model, but there can be more layers than that in the model. The three types are the input, hidden, and output layers. The input layer takes in the data needed to make a decision. These decisions can often reflect the real-life decisions we make every day. If the decision is what type of clothes, I might wear you would input a list of shirts, pants, socks, and underwear. The hidden layer is the decision-making process where it takes that data and makes it into a decision outcome. In the hidden layer of our example the computer could use several hidden layers to design what outfits might go together. The last layer is the output layer that gives an output of the most reasonable of overall choices that could be made. How are the choices made? They are made by weighing out the pros and cons and ascribing to them a numerical value for each choice. This is done by running the model over multiple times and changing the weighted value until the desired effect is chosen one time. Then the model can be run over several times to make the model more accurate.

If we were to create a new social media page, we would do so with the purpose of having Recommended posts, Friends, groups to join, news, discussions, games, and other features to be added later. Our marketing team would also like to have targeted advertising. An example of using neural networks to help the machine make the best recommendations is to take the last five or ten posts, look for keywords, and then in the input layer have multiple nodes as needed. Then thought the hidden layers, using a special algorithm, we could then deduce which set of keywords would be the best option for a Recommended post for our user to see. The User could then signal back to the machine excellent job by hitting the like button. The more the User would hit the like button the more accurate the neural network would get.

This could become a problem with out any ethics to guide our data collection. We could experience massive amounts in invasion of privacy matters. There is a possibility as well as showing and molding our biases based on the recommendations that are given. A Black box classification system, where the user may not understand why the machine is predicting as it is, could also lead to a problem. If the user can not understand why the machine is predicting what it is, this could lead to discrimination based on a classification such as race, sex, habits that are to be deemed as bad.

The GDPR (General Data Protection Regulation) was designed to protect the rights of individuals and how their data may be collected and how its used. This is done with the thought of ethics to protect and gain approval from the users to collect, store, and use the data given. Wishing to avoid the “Black box” problem it is important that companies have Transparency. This way a user would know need to know how a company is using their data that they have gathered. There should also be limited purpose to having the data. For this they must be Transparent with pre-specified purpose for the need for data. There should be no storing for future purpose. There should also be data protection in the system to protect the confidentiality of the user. This should always be updated as reasonably a possible since cyber threats are always growing. There should always be accountability, for these companies if they do not provide the best-known ethics in data collection. For this The Justice systems of the world come together to help hold these companies accountable.

The Idea of not collecting data is not a possibility due to the user demand for a more tailored experience when using websites. The internet is filled with more information than our users would ever care to look through, this means using data to provide this tailored experience is a must have for most websites. Therefore, the GDPR is here to help maintain a standard in data collection.

There are many legal concerns, and no one is immune to potential problems. Amazon had a fine for Eight hundred and eighty-eight million dollars by the GDPR. This occurred in twenty eighteen, when the CNPD (Luxembourg National data protection commission) opened an investigation on them. (2)

The way the GDPR can help with making sure the company is GDPR complaint is by the company using their checklist. (3) The general checklist can be gone through by a company expert in making sure that compliance is met.

One of the Best Practices in current trends use to help protect privacy is all about the money. The prices on obtaining data legally have gone up. Which while making it harder for new business to build up their AI program, it will help to keep data from being sent everywhere as smaller companies will have to incur a higher cost to do business. Another example of a current trend is that under Article 22 of the GDPR companies will need to obtain consent from all customers involved, which could be a lengthy process. Again, keeping things Transparent in a company is also an effective way of making sure that data is used correctly in preserving privacy.

A current business practice is to use Blockchain technology that keeps a record of data, and if the data gets changed at all it will have a record of the change. (4)

Citations

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