Project One

CS 370

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When we look at Neural Netwroks it is a complex set up of different things communicating to get an outcome. The basics of this can be explained in layers, the input layer, the output layer and the hidden layer. Keeping those in mind, the best way to explain how all of this ties together. Neural networks use nodes to communicate, these are activated when given an input. The input makes its way through the network and generates an appropriate response which is an output. All of these connections within the neural network are connected and communicate in a similar manner to the synapses in the brain, they allow the transmission of information from neron to neron. When there is a request put in these neurons look at the request and use math and algorithms to help get an accurate amount of information to pass on to the next neuron.

As this process goes along the system is trying to find where the best built relationship withing th information to process the output. Communication is the key within a network like this, and explains the input and output layers of this system, inbetween the information being put in and the system stirring up an output we have the hidden layer. This layer is the largest part of the system. Every hidden layer is connected to output layers on either end of the network. Now lets talk connections, strating with the positive connections which is the excitement when two units communicate. There are also negative which are when there are inhibitions between them.

The custiomiation of a users experience as in how do we personalize for each individual person. Using algorithms neural networks create different predictive models for each individual user, using collected data the predictive model helps the artificial system gather different settings based each users data. Different algorithms also help to identify relationships between data sets like we make connections in our head.

Looking at ethics within neural networks and the algorithms they use to take an inpu and create an output can be simply broken into three main concerns. These three are privacy, bias, and the impact of human judgement. There is aslo a spot within AI that concerns many and it is referred to as the black box. The balck box is the part of artificail intelligence that exceeds human expectations, meaning humans are not sure how the AI comes up some outputs they do. Meaning we are unaware of the algorithms the AI is using and we aren't sure how the AI even got to the output it gets. Next to touch on the General data protection regulation or GDPR this is the rules and regulations for data protection within an AI program. These rules were used to replace the EU privacy directive. WIthin these rules and regulations there is a data collector the determines how and why the AI processes different personal data. While using this there is also what we call Dynamic Yield which helps this controller to remain compliant with the GDPR while customizing personal experience for each user.

Transparency, this is directly dealing with personal information, within this is can be summed up into a simple statement that is easy to understand. When it comes to dealing with personal data it needs to be accessible and easy to understand without using to many technical terms. Complying with the purpose of limitation, this is saying that all data being collected has to have a purpose. On top of having a purpose it can only be used to the extent that it was collected for. There is also data minimization which puts a limit on the amount of data that can be collected, Keeping it to only the necessary amount and not beyond. There is another part I would like to explain, accountability of the data being collected. This is exactly how it sounds, It accounts for how data is being used. All of these combined will help to make sure that the artificial network instinct cllecting to much information and isnt using it for the wrong reasons as it personalizes each user experience.

Machine learning uses data that it collects to learn, every time it collects that data has the potential of having bias within it that can do more harm then good when it comes to the machine learning. The opportunity to learn a bias that is there imbedded into the data can potentially harm the functionality of The machine itself.

Here is also an area that the “black box” will work its way in, by this I mean it could have effect oin decisions that the machine makes. There are times when we are unsure why a certain decision is made. Machines will learn and volve over time, by this I mean that in 10 years typing bird into google in 10 years you are going to get different outputs then you would today. However there are AIs out there that ro not tlearn past what they are programmed too meaning the outputs will not change overtime because they dont have the ability to evolve.

All of the above are legal concerns that can arise when you are daling with peoples personal issues. A great example of this is hiring procedures. COmpanies will have a hiring process that starts with an AI sorting through candidate and pushing the best candidates to the next level of hiring which will interview with the hiring manager. However alot of companies have had issues with AI developing a bias that didnt give certain demographics a chance to even get there based of gender or race. This causes fora huge legal isue withthe large companies using this types of systems for hiring.

This company simply would not have the ability to develop a quality product without the collection of data from users. It is neede to help analyze and really narrow down what customers are lookingfor and who the potential customers are. However, We will be taking all the necessary steps and precautions to stay compliant with the guidelines of GDPR and make it easy for customers to understand while doing so..

A current trend in data compliance that falls withing the lines of the GDPR is the increase of privacy compliance. Along with that there is the increase of scrutiny of ransomware to help prevent attacks and protect people by involving law enforcement as part of the defense and things like ransom payment process.

*5 trends to watch in 2022: Data Privacy and cybersecurity: Insights: Greenberg Traurig LLP*. Insights | Greenberg Traurig LLP. (n.d.). Retrieved June 5, 2022, from https://www.gtlaw.com/en/insights/2021/12/published-articles/5-trends-to-watch-in-2022--data-privacy-and-cybersecurity

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