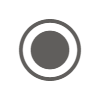
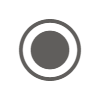
**AI Bias & Cybersecurity - Solutions-20231203\_124701-Meeting Recording**

December 3, 2023, 5:47PM

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 **Radcliffe Dockery** started transcription

 **Radcliffe Dockery** 0:16  
Hi everyone.  
How you doing?  
It's right here.  
So on to say hello, this is your professor right here.  
I'm here we go with our final full lecture and of course next week when I'm back, we'll be going through in detail.  
So things will be read in the course and as well, I'll promise I'll go through my resume, review and parties.  
Of what's going on in industry?  
Uh, AWS reinvent was extremely good.  
It was really informative and I do really want to walk you through what I learned and what's going on in the industry.  
Alright, great.  
Well, let me share my screen here and we're gonna get down to the Business Today.  
And again, I know you all have missed me lol.  
However, I do know that a lot of you have been working on a lot of projects that have been extremely busy.  
So just know that I do appreciate that.  
I do respect what you're going through.  
Alright.  
OK, so last week we went through AI.  
Cybersecurity is interesting and actually met some companies at AWS.  
Reinvent, which we'll talk about when I see you all in person next week.  
However, I wanted to uh, go to the agenda today, so we're gonna go through AI side Security.  
We're gonna review software programs that exist today.  
We're going to look at how leading cloud providers address AI Security, how diversity helped.  
Today I Security how the PMO account for security risk, the role of legacy systems and AI Security and importance of something called BCP.  
DRM.  
Which business continuity and disaster recovery planning and as well I want to review the final assignment I have posted it in Blackboard with examples and example answer I allude or I use lucid air of lucid motors to come to compete against Tesla and the high end luxury EV market.  
I have compared put those notes together for you to take a look at for yourself, and then you can see what I'm looking for as far as your answers go.  
So I really do hope that makes sense for you and it helps you with God you through the assignment which is due of no, no last week class.  
I'll walk you through that as well.  
OK.  
So.  
We have been leading with this all week long, All course long and funny enough at AWS reinvent.  
This was mentioned time and time again.  
The failure of big data, the failure of projects that come through, and only 20% with the outcome.  
So this is happened day in and day out and no one, nobody startups do such as what's going on in the news.  
What reinvent I made of his reinvent, which is the largest enterprise computing conference in the world?  
You know, there was a lot of discussion about how to take AI and make sure AI delivers outcomes during numerous roundtables with AWS, with other companies talking about this, this challenge.  
And we think generative AI is the way that we're gonna get some use cases that make sense while we're working on.  
Now the true \*\*\*\*\*\*\*\* data science AI.  
So this is what's been going on in the industry.  
And again, I'll talk about this more in detail and I'm still trying to get this whole idea of what I learned.  
Reinvent through my head.  
Here is good old gardener group.  
Again, I'm talking about AI Security.  
Now what is really interesting, what they talk about here, though today we need Human focus, security awareness, responsible AI, which is a big theme last week again at a A W3 invent anti phishing and have good UX.  
A good user interface for data entry, which I think sometimes is really forgotten.  
You know the the better kind of, yeah, we have our data entry does help with security.  
I didn't have enterprise security side of things.  
Network endpoint, User analytics, authentication and we wanna bring now with AI now coming in to how to use AI to help with cyber security.  
No, we wanna model integrity.  
We want validation checks, we want data integrity though poisoning detection.  
The data could be poisoned per se, So what we're looking at here now is that Human enterprise security and our next level, and I'll call AI integrity in a model and and AI data integrity.  
So this report from Gartner Group and this is kind of approach that we're looking to see in the market today on AI, cyber, can we talked about last week, no those who have bad intense with AI are at least for hacking, they're using tools.  
So we have to use tools back to combat this.  
So an organization has become very popular in the whole idea of AI based security is crowd strike.  
And you may want to get to understand a bit about contract.  
Does they have developed a tool called user identity behavioral analytics?  
You EAB and it's an algorithm, you know, it's so it's a solution that uses algorithm to detect weird behavior.  
I've known behavior of users in the network, but also of the various endpoints within the network.  
So last week I mentioned the solar winds attack.  
No, there's some they needed to see if something abnormal behavior.  
No, that don't make that.  
That does not make sense.  
So for instance, no, I travel quite a bit across America.  
I travel to Southeast Asia and I travel to Europe, but the moment I log in from Africa it may say let's say I go to Nigeria and I log on.  
It may say you never been to Nigeria, so they may ask me a different series of questions to understand why am I logged in from Nigeria.  
May wanna understand too why I spend 90% of my time in my CRM and key web applications around my partnership management of a WS.  
I spend time in applications on learning, development and pricing, but all of a sudden I'm looking around a lot in the HR.  
What am I doing?  
Is that normal?  
Uh, so Crosstrack uses an AI based algorithm tool to look at the behavior analytics.  
Uh, we have palato who believe won some awards last week and AWS reinvent when it comes to Security.  
Polyacetal has been doing extremely well.  
That's another organization that you should follow, just not to understand how they do business, but maybe it's more potential company you do business with one day, maybe, maybe not, but I like to look at polyacetal networks.  
They have a command center product that's AI powered and breaks down the network by a segment with segment and has a dashboard to sort of look at.  
Know health organic, the health of your network.  
Look at root cause analysis and uses AI so it's always on and it's trying to look a proactive ways to look at that.  
Look at.  
Look at your wide area network.  
So we see here 2 examples of network security companies using AI.  
To help them better identify and attacking the network or a normal behavior in the network and getting on the rules root cause analysis.  
This is fairly new.  
Nothing new.  
Last three to four years and this is where I went to see a I fight back.  
The good is the good AI fight back against the organize.  
Know hackers or organizations out there who spend their time trying to attack data, but I've so this is a very key point.  
I'm AI cyber security authentication and we're Jonathan called one login to flip by called one identity login.  
So what they're doing here is about your authentication.  
Who you are, where you are.  
What are your using Target app?  
What time of day?  
So that's looking at your trend.  
How do we look at who you are then it creates a score and based on that score, it's going to say, OK, I need not to look at another level authentication to get in that.  
I'll let you in.  
Also, watching the score to see kind of what I mentioned before, look at where I am.  
Look at these things on your left hand side and move me across.  
If it's abnormal behavior, it wasn't put in another level.  
Authentication automatically using AI, right?  
So based on what I'm doing in the mixture, I'm doing so ask for a different type of level of authentication or may ask me to go through three or four levels of authentication before I get into the network.  
Leveraging AI, I think what they call vigilance AI.  
So again, we see another example of AI being used to who gets access to what and when and what level do I need to secure you for you again it because remember, no matter how nice of a solution we build within our cloud environments, what applications we build out, our wonderful if they're not secure or they have security holes, it creates a large problem for the organization.  
You may be remember this from last week when we walked through AI cybersecurity landscape with the European Europe, the EU's Agency for cybersecurity, and we looked at the threat landscape.  
So we just talked about, you know, the actual the the attack on the failures and malfunctions.  
We looked at potential outages.  
We just looked at each drop in hijacking.  
It's getting into the network and the furious activity.  
We haven't gone into the actual physical side of it.  
This is this is more of a network side.  
We were looking at so far.  
So what does cloud fit?  
It's on the booking a WS.  
Since you are handling and you are working alone a WS and I work with a WS and we're fortunate the call is have a great relationship with a WS.  
So here's a case study Siemens, the large industrial manufacturer based out of Germany with offices all around the world.  
Look at this.  
They could handle 60,000 cyber threats per second using AWS machine learning.  
Six 60,000 threads a second.  
No human being could do that.  
Right, they have analysis and there's & slow system performance, so it's not looking back in, no slowing down the system or trying to figure out how to manage these which is very key issue.  
And that's probably because Lambdas used in their for my serverless standpoint, that probably really helps there and with the simplified storage and this solution is managed by only 12 people, that's it.  
So it did talk about on the ethics side of AI job losses, though.  
If you had a cyber security center and a pass of this size and scope, maybe you know you had the hundred 200 people.  
Now, with AI you need 12.  
This is a reality of the marketplace.  
Some cost that think about and you see here Sage Maker which you know AWS glue Lambda and simple storage service are part of solutions used here.  
So you are familiar with Sage Maker and Lambda no being used.  
That what cybersecurity.  
So you see, what's interesting is that a lot of these solutions that we know and you deal with day today have multiple uses could've been talking about application development design, no architecture, but now we're looking at now All since 2 tools that you've been learning in this graduate program are also being used for cyber security.  
Put his interest in.  
But over here's my daughter in the background.  
She's a little excited, so I apologize for that in advance.  
She's 10 and she's full of energy this morning.  
So what Sage maker we know?  
What would Sage Maker we talked about it a couple of weeks ago, has an elementary called clarity that would AI bodies with a sage maker and developing AI can also be used to develop applications in AI and generate images.  
Doctors within AI now we also know that Sage Maker also now could be involved in cyber security.  
Told just by taking this course alone and taking this program alone, you're going about multiple users of Sage Maker.  
So not only your learning sage maker today continue to stick to it and the last week of class I will show you Awa Skills Builder.  
We could continue to learn about Sage Maker, cause Sage Maker is a very important solution that it's used industry wide and I had a chance to see it in live and in person last week.  
How often it's being used?  
Yeah, that's a bit.  
The other cloud providers, but we know AWS is #1 but Azure not that far off is #2 I was so Azure is come up with Security copilot.  
And Security coal pit was announced earlier this year and the idea was the responder threats better using AI.  
And now no AI using the intelligence food, Microsoft using an intelligence footprint as leveraging expertise.  
So he's an AI together, expertise from other professionals out there to then look at how they could better know, augment an augment Security.  
So taking industry experts, security professionals and putting it through an AI assistant now, they could tell when it sees us something's wrong.  
What are the best solutions to look at it?  
It's almost almost like a GPT type of version to look at how to address cyber security, which is interesting.  
Can we know Microsoft now basically owns tragic PPT, and we also know on the GPT side that current to couple weeks ago in class we saw that in Canada the the department that wants to use generative AI the most or some #1HR and #2 was cybersecurity.  
So we see Microsoft was thinking about this back in March.  
BlackBerry.  
Umm, who?  
Those of you who are have aids will know that it was the first smartphone that really took off Blackberries, basically, and I was software security company.  
They too used this UE BA as an algorithm approach to network monitoring as well.  
And no, they look for what they call quote unquote normal behavior.  
So they have developed social and that's that's used quite a bit out there.  
Industries.  
It's gonna be used more and more in car, in vehicles or vehicles.  
Continue to be more and more connected.  
So while BlackBerry is not a household brand name anymore, they're still they are very strong name and security and they're allowing a platform that we see how you saw earlier from Cloud strike where cloud strikes and leveraging the same thing UEBASOU EB's are term.  
You may wanna get yourself familiar with.  
So here are something User.  
Here's some things around you UE BA.  
Now in the on the left side of the screen.  
Interesting.  
So look in the middle.  
First, look in your various almost we looked at earlier.  
So time of day, what location we use to access, how frequently you accessing the system and networks, what are typical files and servers you go to look at every day what a typical apps and services you use every day.  
What roles do you have?  
What permissions do you seek to access different applications or what device type or they use in mobile laptop ThinkPad?  
I'm no, etcetera, etcetera, etcetera, iPad, tablet, your car.  
What are you using now to gather all this information in the middle requires AI.  
In the past, where does it putting it?  
In addition to trying to some regression analysis, trying to do some database cross listing now by leveraging machine learning, we could know the thing when Professor Rad logs in all the stuff about Professor Radzi Access Humber Systems are being known and that records being established, it trains being established right, time of day etcetera.  
Now you're the left side of the screen is looking at.  
OK.  
It's Threat intelligence and choosing detection, network feed, system logs, VPN activity.  
So now it's taking what I do and then looking at no MI threatening of these areas.  
So it's gonna first go to determine, OK, if I've logged in in my a threat as an intruder.  
You know what kind of network fees is he looking at?  
How do we secure it?  
Or was the logs and VPN activity?  
I don't know what am I ain't trying to access.  
No.  
Databases, authentication modules, employee records as I mentioned.  
To you see here.  
This is a really good graphic explaining no how you BA works and all this incumbent machine learning.  
And as we mentioned before though, it can be developed as Siemens as shown using Sage Maker and Lambda.  
So if I your career development goals or where you want to go with what you're learning today, it may be in developing applications.  
It may be as a programmer it may be.  
As an architect, it may be, as a systems administrator, senior system and administrator, it may be working in security.  
Umm, because a lot of tool you're using today are now being used in secured with AI has done is allowed.  
It has done as well.  
Why mention that seamless example?  
Some of the jobs were lost during new set of jobs being created now because of the need for security, and they're always will be a need for security.  
And I'll talk about that a bit later on as well.  
So the BlackBerry spells out the benefits of using UE BA reduce workload for security teams, reduce alert fatigue.  
This is a big issue in many Security Teams across industry across the world.  
The big problem is there's so many alerts and sometimes it might be no professor Robert into one area that was just a normal, nothing big, but then 17575 new alerts come up, you know, and it becomes annoying, right?  
Lower overhead.  
You don't use much people to do it anymore either, I thought said to you while you're learning how to do a particular view job role, you wanna work on.  
No, please.  
Also remember that you have to remember that.  
You know, I want you to think like an executive.  
I want you to think like you're a leader.  
So while you execute day today as an everyday worker, think like a leader, always do so.  
Hello so also better protection is insider threats club.  
We don't know.  
We mentioned in the past the threats most security threats come from the inside.  
Also come from the inside.  
Right.  
So it's important we look at ways how to use the AI on the inside would be clicking on a phishing email, etcetera.  
As well here management and monitoring of cloud IoT assets, which is because interesting asset managers cause of the it's called a huge issue in today's world.  
Dog the assets that you have in the cloud a lot that people cannot get their hands around.  
I would wanna be spending in the cloud where all the others in the cloud.  
Right.  
I'll also we have to remember that no in the cloud too, you have numerous databases instances in the cloud that are also critical.  
IoT in the Internet of Things, which I'm not sure if you all have been involved in this, but in IO T no more and more industrial organizations, health organizations, construction organizations are using these tools as well.  
So let's also be aware of being within IoT as well.  
The monitoring of assets asset managers, another area where AI would come up very important issue today as well.  
I think some security issue because you don't know where your assets are.  
How can you secure them?  
Zero trust.  
This is just not a BlackBerry.  
AWS is built off of this.  
For viral trusses, basically making the assumption everyone's a threat, everyone's a bad guy.  
Every once trying to destroy your network and you have to prove to me that you belong here.  
But it's very strict when you think about it.  
You know, in today's world it probably makes sense.  
You want strict access with conceptual with contextual and behavioral flags, right?  
He must continue.  
Authenticate who you are.  
Like actually mean like that every two seconds.  
So I'm just having VPN's have been doing network Teams that Jerry would AI.  
We have to make sure that you stay who you are.  
So under this under this type of model, you know permissions etcetera are irrelevant.  
We don't care.  
Right.  
What we care about is ensuring that your authenticate with keep authenticated who you are and we know what you are.  
So zero trust is a whole mindset that using BlackBerry that's used in AWS that's being used more and more across an array of organizations.  
Bob, get your head around this if you can and lot of great research like have a link here on the bottom presentation.  
Legacy systems and AI Security.  
Now this is what we've talked about in the past.  
You know, we talked about on a couple of weeks in the hell we've been talking about this.  
The right side is the world we all wanna be in today and the left side of the world with 43% of the world's data still resides.  
And actually I'm if I get a chance, I'll remember where I'm with some information I learned about legacies the last week and AWS reinvent.  
Now we have a securities legacy systems we have to secure them.  
And large, that's huge.  
Security risk care, right?  
So what we do know, and this information that was taken from no CIO Seattle, are trying to fund modernization.  
We know that for a long time this user privileges have been poorly managed and legacy worlds.  
We're not aware interfaces are no they're public exposure, not Harding.  
Remember, this world's not built to be a web interface, right?  
This world was built to be in inside nor the source codes not documented, and a lot of Technology out of date are unsupported.  
Sort of fail to meet compliance requirements, so it's really important to modernize these datasets that modernize these application in the back end.  
But when the report was referring to at the bottom is that a lot of couples are not getting the money to do so.  
And some becomes a really, really important issue and challenge moving forward.  
So we have to be ready and ensure that our legacy systems we have to get the data from the West machine secure, we would have to make sure it's secure.  
Umm, so when you take a look at the screen for a second and look at the legacy system side now they are secure.  
Now you have to move that over to a new world.  
That's the integrate.  
It's what, right?  
So it really does make a difference.  
OK, to understand legacy systems here and you can see the job opportunities open up when you start to understand legacy systems because they have to be secured, right and they have security risk.  
Once you open them up, it could create a security risk, yet we know we need that data now.  
Wow, 90% of the data has been out has been created in the last four years.  
That's all great and fine, but you have to understand historical context of data and the legacy systems are there and just not data.  
You have to understand the business logic, the business format, right?  
Code has logic comporium put logic in the code and understand them.  
Business continuity planning is another area and that we need to take a look at here.  
It's called you when you planning is identical.  
It's basically identifying organizational threats and their impacts and how you would deal with them so that you've got that normally are the cause for business continuity planning and national disaster, natural disaster like a hurricane and earthquake.  
Disruptions of Technology, which you know a couple weeks I had to deal with and it's like calming Octa, who we know as I Security company, no they have had a lot of issues as as a late so we know that as well and both talent related people leave in so remember what we talked about here in securing legacy systems that's interesting we talked about how undocumented source code was really interesting now you come back to here if that person put the source code together leaves or retires that's a disruption to your business and creates risk to your business as well.  
So that's the thing about here and what we call BCP.  
And you see here on the top testing and maintenance impacting office recovery strategies.  
And planning development.  
It's about regard.  
Everyone's gonna get attacked.  
What's your plan to get back up and running or to keep the business running?  
And this is a very important part of any security strategy.  
Yeah, you got the best AI you have.  
You want in the world, but what happens if you get attacked or a natural disaster hits?  
What's AI gonna do for you then when you know your main data centers flooded out or main office locations flooded out?  
Or does that to prevent individuals from getting access to the computers or power outages?  
So some of the key challenges with business continuity planning, it could become expensive as needs increase because you're basically saying if one location goes down, how do we keep the business running?  
How do we keep know people getting access to their bank accounts?  
Have people have access to no medical care?  
What if someone's in critical care in the hospital?  
Hospital.  
We keep the hospital up and running.  
How do we move patients around?  
So you have numerous elements here.  
How do we keep it going and the pandemic was a really good test of our business, continuity planning and quite honestly, we were poor most of the world was caught unaware.  
Now I've worked with a couple of technical professionals out here who are really strong and BCP and when their company got hit with the pandemic, say everything is remote.  
They had planned in in advance in case of a natural disaster, etcetera.  
So when it came time to go 100% remote on every single business process, it was a click of the button though activate the BCP plan.  
But most organizations were not ready, and we all could relate, whether it be User where you work, whether you use a customer, whether it be you dealing with, you know healthcare issues, whether it be array of issues, the industries were not ready, they were not ready and it's just not being right to say, OK, you can work remotely.  
It's the whole business processes of doing so.  
It's the whole cultural shift you have to make that quick.  
The the The How many comedies planned for this?  
Not not many, not many planned for it at all.  
So this could drive up the cost you got to invest in a lot of software.  
You got to invest in a lot of hardware.  
You got to invest in data science infrastructure to be completely redundant elsewhere and AWS can help you out with this or most cloud providers by this by having them different.  
Different availability zones or data could be resided so it can become expensive.  
There's normally an whole could look at where mentioning here where the same problem getting a business IT disconnect.  
To what we see here.  
Similarly, we talked about with AI and what we're trying to help you out with this course understand is that you have to know how to speak to business.  
You must have had to speak to business unsane.  
So you know, we have to ensure that business and tech are aligned.  
Correct.  
You have to be aligned from day one.  
You've to be aligned where you're working on projects.  
You have to be aligned when you're maintaining projects.  
You have to be aligned to think about if if we get hit by it, any one of those three factors that could take the business down how fat we'll get it back up to two have to be aligned.  
The fight is good to test these no test the different areas.  
How a sample test do a drill where I mean those you women in schools you do fire drills you know do it drills to see where where we are do a drill to see no do we have a gap do we need to buy more different type of software our expectations are on because similarly like in big data what do we learn about in a lot of big data projects why they fail because expectations are wrong just we want to ensure that we could have a way to recover.  
OK, everyone's gonna get hacked.  
Everyone's gonna have a system outage.  
There's gonna be natural disasters and a pandemic completely laid out where we were not ready and the impact was just not an Employees at their workplace or the impact of getting available items in the store as our ability to get cars, the supply chain got disrupted.  
Plus, we're understand that the business IT disconnect goes across the business and it continue in critical.  
It comes down to saying, when we when something's gone wrong, how do we keep the business running?  
How do we get it back up and running and keep it running as quick as possible?  
We have to have these two aligned.  
For creating a business continuity plan, you may not be responsible for creating.  
This depends on the size of company you work for.  
Some of the orders not be smaller, might have you involved directly make as you'll be part of a team not involved in creating a business disaster or disaster recovery plan or a business impact plan.  
And what you wanna do is explore your current initiatives do around there.  
What are the challenges and no outline the folder listed here?  
Program scope governance structure.  
By that we mean The Who has the authority to, say, turn the plan on.  
Activated.  
Who has the authority to, say, alter the plan updated.  
That's when you do the up the testing and maintenance, you update it, you update when major softwares been updated I there's some new EC2 features are coming out in AWS as you're continuing to making new amounts announcements.  
Every software company comes with new announcements.  
Hardware comes with new amount announcements, network companies Poly autumn.  
We have a new Security module etcetera, etcetera, etcetera where you have to do is keep everything up to date and document your change management processes.  
There's training required for across the business to do so as well, and reporting and Scheduling now.  
This is a high level.  
I'm looking at this girl.  
There are courses out here.  
Certifications on this you may or may not be interested, but you have to understand that what you're developing has to be able to recover has to be recovered.  
Right.  
And All ideal is how do we get that just recovered?  
Now you can see this also involves a lot of paperwork, a lot of cross team in a lot of systems working together.  
There's this is a perfect candidate for what machine learning or artificial intelligence or deep learning could help with.  
Yes it is.  
So looking at no AI, think about this here.  
Planning and developing process a high exercising.  
No, no, no.  
The the exercise.  
So let's plan out what the exercise look will look like once we put together our plan.  
Use AI a sample.  
It occurs and event occurs.  
How do we respond to incidents AI?  
Recovery.  
Can I now input can and I implement the way for us to recover the business and they actually they take on Technology?  
Next step could then be OK, which two parts of the comeback up first to measure.  
We could support the business which you need to be back up first, which do parts of to be with the people, which departments, who are the people, working departments.  
We need to be back up and running first.  
Exactly.  
You up and running.  
How do we get no if you are in the hydro company?  
Power outage issue.  
Who do we get out there first?  
We need the workers out there first.  
So what did I need to get themselves back up and running and test it back through?  
So you'll see in the previous slide we talked to how to put together all these various structures.  
Right, you use AI each step of this process to gather and have an all encompassing AI AI plan that works with your business.  
Recovery goes after recovery plan.  
That we pulled away incident response actions.  
Wasn't that someone else's stuff?  
We looked at from Palo Alto.  
Some stuff looked at from BlackBerry.  
Uh what?  
Siemens developed with SAGE Maker Lambda, right in the very beginning planned development process.  
We could use Sage Maker to develop the process around that.  
What's the plans?  
But remember, multi stakeholder Teams come through again because you need multi stakeholder across all parts of the business business and IT must be aligned.  
Corey, we're looking at the Big Four here.  
We're looking at these four here business continuity.  
Right.  
So you see where AI could fit in, and of course, within all of that, AI bias could fit in plan development process could be filled a lot of cognitive bias where we were gonna do this anyhow.  
The only exercise what's gonna do this anyhow?  
Incident responses could be a cognitive bias.  
This will be covered.  
Actually, we are cognitive bias, but we have, I believe that this departure be up first.  
What's your customer actually think?  
What do your partners actually think?  
Technology recovery actions it could be a battle.  
See, I must get that stood up back in the cloud quicker and faster, but maybe some on Prem solution needs to be All faster.  
You don't know, so you could see cognitive bias play into this.  
You could see Technology bias play into this.  
You could see from some guys around, maybe the fact that if you don't have the right people mix on, your team will understand different parts of the business because you've been culturally biased or gender biased but not understand that you have a woman or people of color on your team who have deep experience in these years but they weren't allowed to contribute to that process.  
Bias could be like, well, I don't need the taxes we have to worry about it.  
That pandemic proved the Rose bias.  
Because why from most companies scrambling to be fully online, where are so much schools scrambling to be fully online?  
Why we're so much supply chain stuck?  
Why we're so much baggage to them, stuck.  
Why was Amazon no overhead had to lay a bunch of people off afterwards.  
Again, can you did not have a plan?  
Right.  
The government was caught completely flatfooted.  
Healthcare had no planning to say if something was to happen.  
How could we accommodate 10,000 more patients in a bed that quicker?  
How could we accommodate the fact that we have so much more people sick?  
Forget our pandemic.  
What if it's a nuclear attack?  
What is a major gas or chemical leak?  
What if it's an earthquake?  
Whatever.  
It's a tornado.  
What is it?  
What is your Sai cyber attack beyond cyber attack?  
AI could assist in all those areas where we talked about couple weeks ago.  
I'll the Google AI was able to protect the weather better than humans or for the first time than traditional weather forecasters.  
What if we could put that all together as part of a Dr plan and a continuity plan?  
So you can see where bias plays in at each level could play in and this is extremely important because we see what's happening with fires.  
We'll see what's happening environment as I'm recording this, there's a major earthquake in the Philippines.  
Uh, no.  
Serious the serious stuff and we've just lived through pandemic globally, the world community.  
We live through a pandemic.  
AI could be used for good and so much areas as one of theirs.  
It could be used for, but we have to have the business and IT aligned and we must under all circumstances deal with the biases called a lot of the discussions on the pandemic was through a lot of biases were there.  
AI bias and cybersecurity.  
So we look at the you, you EB a model.  
Geographic bias. I mentioned.  
What if I log in from Nigeria versus if I logged in from Germany?  
Is it gonna treat me the same?  
Is it gonna apply the same type of scrutiny on me even within the country, if I apply from no deli?  
If I apply from the Mumbai, if I apply from the Technology centers of India and I and I log in, it's OK.  
But what if I log in from my super All area, come going to visit friends and those who have families in India and raw areas look smaller?  
Villages.  
No, we'll have to see.  
What?  
What do you see when you try to log in or not?  
Your name, now my name.  
I get away with it, but if your name and you start doing a company and the first time you had to travel or even go outside of your zone.  
So let's say you are no Chinese and you are first time going out of your zone.  
You look in Toronto, but now you go log in from Scratch Yuan for a project.  
How's it treat you?  
Device type systems bias now does it treat iPhone better than Android?  
And we laugh about that.  
But in many cases where in the views on each one of each platform are completely different experience logging into their network because the developer or designer does not used to iOS or it's not used to Android.  
What gender bias?  
Complain, fall.  
What's a man?  
Don't try to access HR records.  
That's only a woman's job.  
A bunch of stuff underneath that.  
Why is the woman trying to access the file servers databases?  
Looking at, you know, our top financial customers.  
Neuralgias how I act within a network may not be typical for my role because from my neurological standpoint of how I think I think differently.  
So maybe I like to log on at various times a day, cause it's when my best thoughts or when I'm more engaged to work.  
And of course, cognitive bias.  
So we could see Cyrus Security though, and ray of AI bicycle playing to these different tools that could cause you issues to log on if it's voice activated up to log on or authenticate within it up.  
What human accent doesn't understand what you're saying?  
What is the color of your accent?  
I didn't put you to a third level authentication.  
Ohh things to think about an AI bias and cybersecurity.  
I mentioned before, AI bias in business continuity planning.  
People buy us.  
The system's bias.  
Right.  
So we understand AI bias plays plays out in all of these areas.  
Got a call from people buying and now you're programming that into your AI.  
And again, if there was not any issues why they take so long for why did we scramble so much or independent?  
We all should have been ready, which should have been ready, and I'm not sure for a lesson has been learned and we know here Technology blithe is a big part of this because I, you know, legacy technology and we also know Technology, the legacy technology creates a whole bunch of other biases.  
Again, he says those guys plays into this as well.  
So in summary.  
There are many ICT vendors off of an AI based cyber security solutions.  
I just walked through a through a few of them for you.  
I'm cloud vendors are heavily involved.  
I just showed you what AWS for for your career development be somewhat familiar with AWS, Azure, Google Snowflake and others.  
Be very aware what they're doing in the area outside your security.  
AI buys, but the significant roles that Security about making us much about what if?  
Not as we just showed, especially here, right?  
It's continually evolving because cybersecurity is evolving.  
AI is evolving.  
The two are probably the two hottest topics in IT actually in business.  
And business continuity continuity plan is essential cause every organization gets attacked.  
The questions can you we or a quick enough and keep the business operational and then I could use the address that now some Security.  
Let me say this, the one thing in the AWS reinvent that came up.  
I have no fashion with the Vice President of worldwide channels at AWS and she had on stage and in the executive leader at Deloitte.  
And the letter working with AWS on a on a cyber security center of excellence or partners and the leader at Deloitte.  
She said that in North America, she estimates were probably have a 500,000 person deficit skills deficit.  
And cybersecurity, we know enough individuals.  
Who could identify and attack, understand an attack and figure out how to respond to an attack?  
He quoted half a million people shortage we have in North America.  
That's our estimate at Deloitte and cybersecurity.  
I mentioned that because obviously if cybersecurity is gonna continue to grow, which it will because as we mentioned last week, it's the new war ground.  
It's the new battlefield and AI, and I was going.  
The hottest topic of the generative AI, and because of the need for responsible AI and business results of AI.  
Understanding Security or leveraging AI and cyber work very nicely together.  
Well, you're very technical.  
Whether you're somewhat technical or whether you are just at a business level operational.  
AI, Cyber, Arthur, perfect career compliment as you're throwing to understand a little bit of cobalt our little bit of a legacy system.  
You're gonna be fairly.  
Multifaceted.  
You're in a very good position to do so.  
That's from what I see in the industry today and we'll talk more about that when I'm in person.  
But please do understand that cybersecurity well has grown and not like similar girl.  
Think about all the cars are connected to the Internet.  
Think what everything is connected to the Internet was connected to someone to the Internet.  
Think about how AI were to make all these things better.  
Think about if you're a hacker, you wanna cost disruption.  
How can you say I think how we're gonna counteract that with AI?  
Because the whole interesting feel what you could do and cybersecurity.  
Very interesting what you start to do.  
So the so this is not just for the course, but also think about for yourself.  
I'm moving forward.  
OK, so I'm gonna walk through the assignment.  
Actually, I'm gonna switch my screen here for a second and I'm gonna walk through the assignment.  
I'm going to walk to the final assignment which is due on the last week of class.  
Where's the depending on which one you're in.  
So you're on 504 and E for you guys.  
Sorry, does not for you guys, because I'm gonna have you guys in person.  
It's for my.  
You have to look into what I see in my blackboard here.  
Yeah.  
So IGA downtown campus.  
I won't be seeing you.  
Umm you are due.  
You are due December 13th, 11:59 PM.  
I know because All have been busy, but you have to fill it in by then because I need time to mark.  
So it's absolutely essential.  
Please get this done.  
OK, OK, so here's the assignment. I've broken down.  
It's in here for you to answer.  
Now what I've done this time now I've put in example of a correct response, but really what it means?  
Example how I would answer the question.  
OK, to give you a blueprint, and I've put different scoring on each answer because from a different way I think, OK, so first question, but could you have chosen during this course please identify their key glow strategies no more than two.  
Hint.  
You'll normally find this in your annual report and press releases for my answer.  
I need lucid motors, the EV company, and I picked 2 strategies.  
One is them looking at strategic partnerships.  
The lower the cost of production and R&D and they signed the deal with Aston Martin, I referenced it, you could take a look it up yourself, but you say something back it up.  
Right.  
I'm backing it up saying here's proof Aston Martin funding to do it.  
Lucid, OK.  
They wanna increase production.  
They've missed targets.  
I got proof that they've missed targets and they fell in the low expectation, so they gotta figure out a way how to improve production while keeping costs in line.  
Don't have too many strikes die fog.  
I'm looking at at Lucid. OK.  
Think of one or two years where I could help me to come to you objectives.  
So I picked one which is the partnerships right?  
Should you?  
Partnerships.  
I picked one strategy, one I explain to my own words what I believe.  
Now you could use.  
You could refer to different quotes out there if you see quote.  
If you see your quote, please reference it website link what does me talking about it cuz I love cars and I love tech so the perfect way to talk up for me to talk about it in one area.  
Right.  
I'm talking about how because you use AI to strengthen partnerships, how they can use AI to understand the buyers better and they could use AI as they learn more about these different partnerships they develop, how to develop their own software platform, where other car companies could buy from them and they could use Sage maker bed rock from AWS and Lambda at a backbone of a platform.  
And they developed actually, that they actually sell to auto manufacturers or other think tanks out there who want to learn more about EV development.  
Interesting, right?  
And three, which AI biases as service security threat to your organization?  
Be aware of.  
I lay out what I believe.  
In this case, no.  
You mean how have as many?  
You may have more or less this is me.  
I never biases gender Technology age bias.  
Cognitive eyeball you cause sometimes it's only thing they know everything and they don't gender.  
I laid out that know from just in the Chinese market, woman on the FAST congressman supply in luxury cars, my Technology bias.  
No Alexa age bias because the auto industries are old.  
I loses a new type of auto company.  
Will they be able to work with companies who have a using more legacy Technology?  
Larry.  
Automakers are doing, and also to understand that they have a history and legacy.  
So this lucid hiring, the right people and moving the right people have to.  
There, they do have the right age mix experience makes to help them meet these needs, and the final words worth the most marks as the business case.  
Now clinician, because I want you to write a big business.  
So I showed you how I want you to respond.  
That's why that's important for me to do this for you.  
So step one stakeholders for me to stakeholder and lucid the marketing department, Finance, Technology, manufacturing, distribution environment and human resources and explain my reasons why we need them.  
OK, so in your case put under key stickles key department.  
I need to be involved, OK?  
Metro projected outcomes in business terms, so I know Lucy's measured by profits, revenues, cars produced and sold for AI project better or just one of those.  
So give it example to enhance partnerships, I want an increase sales increase deliveries because I know it's a problem.  
It is another article shown that I know it's a problem for them to my AI product should be focused on how to address that problem.  
Balance, costs, value and risk, so this section here.  
I don't want you to waste too complicated.  
I wanted to show you real simply how you how you could do it, what would it cost to put together an AI project for me?  
I said and mostly gonna be quite familiar, cloud computing cost, labor cost access, third party reports, measurement tools within manufacture and firing costs were mine.  
So look at.  
Think about the total cost.  
No, that then number, what things are real fair these would be aware of.  
In my case, a cloud computer and overall computing costs, labor costs wouldn't need who I need involved from the departments.  
What kind of reports to have to pay for to get access to no manufacturing team?  
No, they have tools and have to spend money on them and look at measure our wanting together and the cost of hiring people or promoting people or letting people go and it's aligned with again they're they're trying to do their losses while increasing production targets.  
I reference it and the last point that she is that she won.  
No, and you're doing the actual presentation to your stakeholders.  
Your part you would put this first, but I'm explaining why they benefit a bit.  
How they can benefit from AI and you know what it means for them and we're bias could make a difference in here.  
OK, so I actually to focus on this.  
I actually could put in something more about cyber security.  
I actually should put in something.  
I'll probably update this, but I could put in and also say that the risk is if we don't put these right color tools ahead, so secure cyber security risk for cars that are produced on the road as far as the partnerships go right within the partnership model, no, I risk here that I find out working with Aston Martin.  
I'm very large company.  
Nope, that's double companies.  
Data is exposed.  
Could I use AI to help cybersecurity in that area in the partnership?  
Yes, I could.  
So you see, I didn't even mentioned cyber here, but you could school just talking about AI and cybersecurity working together.  
OK, everyone's worrying about cyber security before we put AI cybersecurity together, and Humber College does have a cybersecurity program.  
You may want to look into if you're interested as well.  
OK, so I could put cyber and audium but again want to give you an example how I wanted the questions answered.  
No.  
Get up.  
Go write an essay.  
You go fill it out in the field here and you have more than enough time to get this done.  
More than enough time.  
OK, so please get this done because I need the time to mark get it done and we're all good to go.  
Alright, so that's it for this class.  
I'll just lecture has been useful.  
Please send me an email if any questions about what you've seen and the questions about though what you wanna talk about, et cetera, et cetera, et cetera as well.  
Please ensure that these all your up-to-date all your labs.  
If you are behind, let me know, I'm going to be away.  
But I have access to my devices about our company's conference, so we'll have access.  
I mean the same time zone as well, but please, I know you have a lot to get done.  
Get this done is very important and the last week class, as promised would be my resume.  
Review what's going on in the industry.  
What's hot?  
What's not fat and our summarize what I learned, AWS reinvent all right.  
So thank you very much.  
It's funny, I'm looking at I was transcribing what I'm saying and either I don't pronounce things right, but it's like it says what's fat at summer.  
Who I learned.  
I said no, what's hot and summarized not what's fat?  
It's funny to read transcription so so it just tells you how AI is really good, but because I have a bit of an accident in how I say certain things sometimes or a bit of a stutter isn't pick up on that.  
So there's another no bias where we want people who stutter or have a bit of slurs speech because of a physical health issue or a mental health issue.  
No, these tools have to get a little bit better at that as I'm reading the what I'm saying in real time to you, ha, there we go.  
Alright everyone, so have a great week again.  
Thank you for your patience with me.  
Hope ohh sorry.  
One last thing, sorry.  
Sorry, sorry, sorry, sorry, sorry.  
Sorry, you would have been.  
You would have been given a survey response.  
Uh to respond to a survey, I need everyone to respond to their service.  
I'm gonna get in trouble.  
I would Humber College if it doesn't get answered.  
I'm gonna send the survey link in.  
I'm in in the blackboard due to look at.  
Please fill it out, it helps us understand this course if you like it.  
Just give us feedback on the course please.  
As for the first half you did with Professor JB and the second half here with me.  
OK, so please fill that out.  
I really need you to fill it out.  
Please ask me what deliver and value for you because I know where the professors know our jobs to serve you and know you are our customer.  
So definitely want to respect that.  
Alright, great.  
I'm so thanks again everyone, and we'll see you again soon.  
Have a good and safe week and be well cheers.

 **Radcliffe Dockery** stopped transcription