

DOPE LABS

Transcript of Lab 055: Don't Get Hacked

Zakiya I know we already did an episode about scammers, the art of the con.

Titi Yes, we talked about what happened at Fyre Fest. Fyre Fest feels like it was forever ago and yesterday.

Zakiya Right, but you know what I think is gone all digital between inventing Anna, the Tinder swindler, that couple that was stealing bitcoin from people--

Titi People are getting advanced and they're scamming technology.

Zakiya Yes, I've got to build up my digital fortress because it's looking grim out here. Yes, I've been getting so much digital spam that is actually scamming on the back end like links that say, track your package here, even if I haven't purchased anything.

Titi That has been going around a lot. I've gotten text messages that are like, "track your UPS package," which I might have a UPS package on away, and so you're tempted to click it. But there is--what is it? Scamware, spyware?

Zakiya Ransomware, phishing attacks?

Titi I don't know any of those words.

Zakiya You remember when everybody was getting emails about those gift cards and people were buying them? People were buying gift cards and it was not a gift.

Zakiya Yeah, it's out of control.

Titi I'm Titi.

Zakiya And I'm Zakiya, and from Spotify, this is Dope Labs.

Titi Welcome to Dope Labs, a weekly podcast that mixes hardcore science, pop culture and a healthy dose of friendship.

Zakiya This week we're talking all about cybersecurity.

Titi And with everything that's going on in Russia and Ukraine right now, there's been a lot of talks about a possible cyber attack.

Zakiya We really wanted to know more about how people's online data is collected and used. What happens during a cyber attack and what we can do to stay safe? Ready for the recitation?

Titi Yes. Let's get into the recitation.

Zakiya So, what do we know?

Titi Well, I know that we are always online, whether it be for work or social media. Every time my phone tells me how long I've been like the amount of screen time I've had and I go and check the details, I'm like, I spent a lot of time on TikTok and Instagram, and sometimes I'm ashamed because it'll be like you were on there today for nine hours. How is that possible when I work eight hours?

Zakiya That's nobody's business. All right. That's the first thing.

Titi That's my business. That's my business.

Zakiya We also know that there have been some pretty big cybersecurity breaches in the news. You remember the Colonial Pipeline attack. You know, it's one thing to feel like it's the matrix and people are moving the zeros and ones and they're green and move it down the screen. But the gas?

Titi Honestly, like how is gas even involved with this? Those types of thing just go way over my head because every time I think of cyber attack, I just think digital stuff.

Zakiya Isn't it in the cloud? That gas is real?

Titi And right now, with everything that's going on, all the tensions because Russia is invading Ukraine, the U.S. banks are preparing for a potential retaliatory cyberattack from Russia.

Zakiya And the topic of cybersecurity, we're seeing that blowup even in entertainment. So I already mentioned Inventing Anna and we talked about Tinder Swindler, but there's also The Matrix. So the old one and the reboot and Enemy of the State, too.

Titi Yes. Is that the one, Will Smith?

Zakiya Yes.

Titi Yes. So what do we want to know?

Zakiya I want to know what's being collected. What are you all taking off my phone and my computer? What are you doing with it?

Titi Why do you want it? Yes. First and foremost, why? I am very boring. You want to see all these silly pet videos? I don't know why.

Zakiya And then what's legal versus less illegal? What are people allowed to do with our information, whatever they're collecting?

Titi My question is what is ransomware? We hear a lot of things like ransomware, spyware. Where is all this stuff coming in?

Zakiya Where is the ware?

Titi Yeah, I don't understand any of it. And so I just want like clear definitions for all of this stuff.

Zakiya Yeah. And like you said, who wants our stuff? Are we the common people? Are we the targets of these types of cyber attacks? Or are they like high value assets like on Mission Impossible? Is it for the common people?

Titi Right? Because I feel like there's not enough money in my bank account for you to want to hack it?

Zakiya Yeah, I don't understand. But if I am a target, just in case, what do I need to do to be safe? You know, because Norton isn't out here anymore?

Titi No, Norton antivirus?

Zakiya Nobody's here to save me, so what do I need to do?

Titi That just outted how old we are.

Zakiya That's alright, I'm OK with that.

Titi Let's jump into the dissection.

Zakiya Our guest for today's lab is Christina Morillo.

Christina Morillo My name is Christina Morillo. I am based out of New York City. I am an information security and technology practitioner with about two decades of combined experience in everything from enterprise technology, information security, cloud.

Titi Christina recently published a book called Ninety Seven Things Every Information Security Professional Should Know, and it's a practical guide from a variety of information security experts.

Zakiya So we asked Christina, "what exactly is cybersecurity?"

Christina Morillo Cybersecurity is pretty much the practice of protecting systems, networks and programs from digital attacks. It's like the equivalent of an intruder coming into your home and taking your stuff or accessing or touching your stuff.

Titi Hmm. I can't imagine somebody coming to my house and just touching stuff. Oh, that just seems gross.

Zakiya That makes me feel sick. Even when I think about stuff that I'm looking at on my phone, things that I'm saving like, I know I share a lot of links, but I don't want everybody all up in my stuff and I don't know about it.

Titi Exactly, exactly.

Zakiya I don't know about you, but I keep a lot of tabs and bookmarks. What would you do if you lost all of that?

Titi I wouldn't even know where to begin. I think a problem that I have now is that because I use my phone and my finger on my computer to enter my passwords, I don't remember my passwords anymore. I don't feel like I have to. But I know it's important because if all that stuff was wiped away, I would still need to have access to all of my things, like my email and everything that requires a password. Right. So I would feel some type of way.

Zakiya And so all of this, you know, quote unquote stuff numbers, passwords, all of these things and also like browsing behavior and what we like and don't like is really hard to understand what's legally collected versus, you know, was illegally collected. So let's start with the legal collection of our stuff on the internet.

Christina Morillo The reason why data is collected in the first place is to help answer everyday questions, right? Evaluate outcomes and also make predictions about trends. So all of our data is valuable.

Zakiya So this changes how we've been thinking about it. Absolutely. People want to know when we see a page what we clicked on, why we clicked on it to help them understand what's useful.

Titi Yeah. Like if you come to this website, what are most people clicking on so that it gives, like a lot of people, information like what's most popular? What are people interested in? Christina likes to think about data in four categories. The first is personal data.

Christina Morillo That's like any personally identifiable information, like Social Security numbers or your gender. Even your IP address, your device ID, right? Like stuff that can be tied back to you as a human, as an individual.

Zakiya And in addition to personal data, there's also engagement data.

Christina Morillo So that's how customers interact with the business. So that could be like social media apps, texts, navigating to different websites. Everyone is now aware of the cookie pop up that comes up, which is super annoying.

Zakiya We see this all the time on websites, but what exactly are cookies?

Christina Morillo Cookies are pretty much little software programs that retain information as an example. They they retain maybe your your preferences if you like your website icons to be larger when you visit cnn.com, if you always search for a specific topic, you know, if you have favorites listed on the site for any reason, also your sign in, your login information. This is like little pieces of software that are downloaded onto your computer to retain your history.

Titi The cookie pop up is something that, depending, I might just say fine, whatever, just accept. But sometimes I take the time. I'm like, now I just only collect what is necessary or whatever it says. Like, I switch all those things off. But I think my default is just like, accept.

Zakiya No, manage my settings. One Trust I want those things all off. I only want the bare minimum that they need.

Titi They're taking advantage of the impatient folks, like move this thing out the way. Let me see this toothpaste.

Christina Morillo Then there's like behavioral data, so that's transactional information. So your purchase history, usage, you know, when you swipe that credit card, swipe that debit card, all of that information is being stored there. The credit card you use, the time, the location, the store, all of that information.

Zakiya And last is attitudinal data.

Christina Morillo That's more about consumer satisfaction. So that's like looking at criteria to purchase an item or service.

Zakiya That's a lot of different kinds of data. I think previously I would have thought it was all just one thing. So we've hit personal data, engagement data, behavioral data and then attitudinal data.

Titi Yeah, I think most people just think it's your passwords, that that's all they're selling.

Zakiya And so all of these things can be legally collected. But where does it all go? That's my question.

Titi Yeah, and how are companies using that data?

Christina Morillo So once you have all of this information, all of this information is like dumped into the terabytes and petabytes on hard drives and databases.

Titi From there, the data is organized into large datasets. Then the companies hire data scientists to develop software to analyze the datasets. And from this, they can use the data to discover patterns and make predictions.

Christina Morillo So they take all this data and then they can say, OK, well, we can predict that. I don't know the 2021 Nissan is going to sell more than any other vehicle in 2022.

Zakiya So, OK, if there is a lot of engagement around a big collection or something that comes out, people can predict this is going to make a big splash. People are going to spend a lot of money here. People are clicking here. There's this much interest. Maybe companies adjust once they see how people are responding to things they put out, right?

Titi Yeah. And I can see how that can be valuable to a business. You want to know where to put your marketing dollars. So you're like, If I know that everybody wants this 2021 Nissan, I'm going to put my marketing dollars behind that 2021 Nissan and not another

car, because then it just be wasted money. Or if I am, I'm just going to like, put more here and a little bit less there.

Zakiya That makes a lot of sense. And this really highlights what Christina told us is the motivation behind collecting this data in the first place.

Christina Morillo At the end of the day, though, it's really about getting us to buy more or use more of something.

Zakiya So just like you said, Titi, companies are using this for marketing. They're trying to create specific, targeted marketing campaigns.

Christina Morillo It's getting us to use more social media, getting us to buy more at Target, right? Like, for example, when you go to Target and you go into by soap, but you coincidentally walk out with like four hundred dollars worth of stuff that you didn't really need. It's not by coincidence, right?

Titi There have been so many times where I have online shop and I'm like, I just need a plain white blouse. And next thing I know my cart is filled with 14 items. And I'm gonna figure out what is going on and how did those items get in there? I know I put them there, but it just feels like everything is being put in front of me in a very specific way that makes me want to purchase.

Zakiya Do you know how and some of the sites it'll say, OK, you're looking at this white blouse and other shoppers who looked at this also looked at this tan built with this gold detail. Yes, I want that with white blouse. Yes, you know that already.

Titi Yes, you may also like-- and I'm like, Oh, no, you know, I also like this.

Zakiya Yes, and so all of that, I guess, is behavioral and attitudinal data that is being collected to inform my shopping to make me continue to shop. I'm reinforcing the algorithm because, you know, I'm adding it to my cart.

Titi Always, always, I mean all of this feels a little bit creepy, but it is legal.

Zakiya And it is working. It is right. I want it to see that, and I think that's the strangest part. Do you remember when we went to, we were in New York?

Titi Yes, I know this story

Zakiya And we were shopping and I was really torn on these pink Adidas.

Titi They were what? Stella McCartney?

Zakiya Yes, I think they might have been Stella McCartney, and they had this really interesting gum soul that was pinkish-reddish, but it was really giving me all the vibes I needed. And we stood there and I was like, Oh, I just bought an orange Stella McCartney hat instead. We left and that shoe showed up everywhere. Yeah, in any chance there was for me to get an ad, it showed up.

Titi It also showed up for me. Yeah, I got Instagram ads about that specific shoe, which let us know that even like where you're standing within a store, like some of these businesses have worked with companies that let them track where you're standing, how long you're standing there.

Zakiya Bluetooth, Wi-Fi.

Titi All of that--.

Zakiya Even if you don't connect, you still have device IDs, right? And that's your personal information.

Titi Your location services.

Zakiya And so it's like, we know it likes this type of stuff. Oh, and it's all legal.

Christina Morillo It's all of these like statistics and it's all around the data science and the psychology around it. It's usually correlated by like different demographics, right? It could be based on age, sex, location, how much you make, if you've gotten your education.

Titi And some companies don't just use data for their own marketing purposes. They also package and sell the data to different companies and organizations. Christina points to Facebook as one example.

Christina Morillo They collect a bunch of information, including attitudinal data, right? They know if you're feeling sad, depressed, lonely, and they're able to then serve up content that matches your mood, your demographic, how much money you make, what you like, et cetera, et cetera.

Zakiya I'm not a big Facebook user, but I can say on Instagram, if something is happening and I like one of those, you know, text posts, then like if wait and see or I can show you better than I could tell you was a person, when I'm feeling spicy and I like that, it serves me up more content just like that, even if I'm not following people.

Titi Exactly. Look at your Explore page. Your Explore page is curated, based off of the posts that you like, and my Explore page does not look like your Explore page right, Zakiya?

Zakiya Yes. Mine is all cooking videos, sassy quote, and animals.

Titi Mine is like eyebrows, babies acting silly, I don't even know, travel blog stuff.

Zakiya And now Instagram also has suggested posts in the feed, so they're constantly giving us content so they will say, "Yes, I like it. No, I don't." They're just trying to learn what we like and don't like.

Christina Morillo The more they learn about you, the better they can serve you. Now, because Facebook collects all of this data, that makes them extremely valuable. Because now I'm another corporation, let's say I'm Colgate and I want to sell you more toothpaste, I need to know how you tick, why you shop, how you feel a certain way, how I can market to you as the consumer or to your demographic. And so I would go to a company like

Facebook and I would say, "OK, can I buy this data? So can I pay a charge to access this data set?" Or can I pay a fee to market on your platform because I want to sell more toothpaste? And the demographic I really want to sell to are top users on Facebook. What a lot of people don't understand is that when we do not pay for a service, we are the product.

Titi You say this all the time?

Zakiya Yes, if you're not paying for it, you're on the shelf, baby, ok.

Titi Nothing in this life is free. You paying somehow.

Christina Morillo We don't pay for Twitter. We don't pay for Facebook, we don't pay for Google, we don't pay anything. What we pay with is our data.

Zakiya We don't pay cash, but we pay in information about who we are, what we believe, what we're interested in, what we will buy. All of those things inform companies and help them make money off of our clicks, off what we choose to share, all of those things are just embedded into the process. You can feel kind of helpless, right? Because if you don't choose to let this information be shared, you can't use the site. Do you remember when there were all those emails coming out about companies updating their privacy policy?

Titi Yes, oh my gosh. That was a wild time. I completely forgot about that.

Zakiya It was like everybody was sending emails at the same time about what they would and would not collect and all of this stuff. And that wasn't even tied to the United States.

Titi Right, in May 2018, The General Data Protection Regulation, or GDPR, was put into effect, and this is an internet privacy and security law passed by the European Union. But since the internet is global in most websites process data from EU citizens, it pretty much affected the entire internet.

Titi And so what did that mean for our privacy as users of these websites?

Christina Morillo People basically own their data. They have a right to delete their data, to collect their data, to request that a company delete their data. So because of that, there has been a lot of legislation around privacy and more discussions around privacy and security. So now, companies have to tell us that they're collecting and what they're collecting. It's a great win for privacy. It's a terrible hit to usability. It makes experience terrible because people rarely know what they're clicking on. People also don't know what they're being asked to click on.

Zakiya Yes, it slows down the process where you go on from site to site.

Titi Yeah, like I said, if I'm in a rush, I'm just hitting, accept because I just need to get to what I'm looking for and I'm like, I don't have time for this. Yes, except the cookies. I love cookies. It's perfect. I prefer a chocolate chip. And so I just click accept and keep it moving.

Zakiya You know, another option is to use DuckDuckGo. That's a browser that limits what can be collected about your browsing activity. My mom actually put me on to DuckDuckGo.

Titi Really? .

Zakiya Yes.

Titi Aunt Vicky, you on it?

Christina Morillo I use a browser called DuckDuckGo. I use it when I want to go navigate something and I don't want to be tracked or I don't want any potential malicious spyware or anything to be installed.

Zakiya I think this helps us get a really solid understanding of what all the various types of data are, how it's being used by companies. I mean, it seems like it's being used in aggregate. You know, so in groups to understand trends and behavior and what people like, and all of this stuff is legal. But we're going to take a break, and when we come back, we're going to talk about the things that are illegal. So what happens when there's a data breach or a cyber attack? And what we can do to keep our data protected?

Titi We're back and we've been talking to expert Christina Morillo about data privacy and how to have more control over the data that's shared with companies online.

Zakiya Next week, we're talking about organ transplants. We'll explore the science behind donor matching with our guest expert, Dr. Dave Lowe from Thermo Fisher. Turns out, it's a lot more complicated than just matching blood types.

Titi Now let's get back to the lab.

Titi So now that we know our data is being tracked and analyzed all the time, are there protections in place to keep our personal information safe? Yes, I understand that what I click on and what you click on and all of our device IDs, all that stuff is supposed to be analyzed in bulk in groups functionally making it anonymous. But is anonymized data a real thing? And is it actually keeping our information safe? We asked Christina.

Christina Morillo Well, what it's supposed to mean is that any information that is collected is stripped of any personally identifiable information. If you're collecting my data, if you're collecting my information, that means that you're going to strip my Social Security number, you're going to strip my location data. Any information that can be tied back to me as a person, you're stripping it. And that's what that means by anonymize. So you're only collecting information that you really need. So it could be city, state, things that are very generic that can apply to a population versus things that are very specific to me as an individual. Now we don't really have a guarantee. There's really no assurance. We basically have to trust that what companies say is correct until there's a breach and they say, you know, we really care about your security and care about your privacy. However, you know, your data has been exposed in this breach.

Zakiya Yes, I don't want my data in the breach.

Titi Yes, but it always seems like everybody's data is in the breach. It always blows my mind. There will be a security breach and I'm just like, but I literally have never even used this before. So how is my information there?

Zakiya Yes. And what exactly is the breach? Wikipedia defines a data breach as the intentional or unintentional release of secure or private confidential information, but it feels wrong, right? It's not secure. If somebody accessed it and it was released, it's not secure. It's no longer private.

Titi Yeah, it definitely wasn't secure enough, it's just like, you know, those diaries we used to have when we were kids who had those little locks and we thought everything was secure. All you had to do was just pull it and it would just pop right open. That's what these companies are using to protect our data. That's what it feels like. Them little pink locks ain't doing nothing.

Zakiya And, you know, it feels like these things are happening more and more. So there was recently a report reviewing the data breaches in the first six months of 2019, and that report showed that there were 3800 publicly disclosed data breaches. And do you want to know how many records were compromised? I feel sick already. 4.1 billion. We're going to link this in the show notes.

Titi Billion with a B?

Zakiya With a B, baby.

Titi Oh my gosh, it's everybody.

Zakiya And just to give you a sense of magnitude 3.2 billion of that 4.1 billion, 3.2 billion of those records were exposed by just eight breaches. Somebody has too much access.

Titi That is crazy. Only eight breaches and you got three point two billion of those records.

Zakiya And the actual type of data that was exposed, it had email addresses that was in 70 percent of the data and passwords. That was also on 65 percent of those breaches. So...

Titi We in trouble. We in big trouble.

Zakiya Yeah. And so when we think about these data breaches, we know that's not from a company wanting to know whether I like a red top or a white top. Right, exactly. This is something that's a little more malicious and is illegal.

Titi We all know that data is valuable, especially for companies who use data to inform their business strategies. And if it's not properly protected, then there's a risk for a cyber attack, such as a security breach or a ransomware attack. But we wanted to know more about ransomware and the people behind them cyber criminals.

Christina Morillo They basically want access to your bank accounts money, right? Or something of value that then they can sell on the dark web. It's malicious software, and the sole purpose of it is to encrypt, which is lock, right, to encrypt your files.

Zakiya It's always about the money. It's always about what can be sold.

Titi Cash rules everything around me.

Titi Yes, dollar dollar bills, y'all. And it just seems that in the new digital age, ransomware is the method,.

Christina Morillo So, it may encrypt your entire C drive, so every file you have on your computer is locked, right? Sometimes it will have a nice little lock. Sometimes you'll see it's some kind of logo on your screen that says "you've been ransomed."

Titi Some of these things, you feel like it's obvious. Like, I shouldn't click on this because you click on a website and these things just start popping up and flashing, and it's like if you click here, you get a million dollars and a trip to Aruba and, you know, random text messages from unknown numbers that have weird links. I been getting a lot of those recently. Do you remember the Facebook hacks and when you get weird links from like friends and your messenger? And then if you click the link, your profile sends it to all of your friends?

Zakiya Everybody in your contacts. And this was happening, not just on Facebook. You know, I used to dabble in Facebook. I don't anymore. But this was happening on other platforms and people would say, Oh, that wasn't me. If you get a message from me, don't click the link, you know, stuff like that.

Titi Yeah, I got an Instagram DM from a friend that was saying, knock off gucci bags. You can get a knockoff Gucci bag for \$20. So I texted him and said, "Hey, you need to change your password."

Zakiya Yes, because you're selling Gucci bags. I don't know if you know. And it happens in this world of convenience where FedEx is saying, click here to check your tracking link, right? Or somebody else is saying, Hey, want to see the latest sale styles or want in on this great travel deal? And links are everywhere emails, text messages and everybody's using these little shorthand bitterly and all this stuff. All it takes is one click, and it's so easy to do if you let your guard down just a little bit.

Christina Morillo So you click on a link. It takes you to a bad website that downloads malicious software, or you click on an attachment via email that has malicious code attached to it, which downloads that bad software onto your computer and then does its thing, which is locking of your files.

Titi What I would need to know is something like this happen to me is how do I get my things back? I would like my things back. So after a cyber attack, how do you get out of it? Like, how do you loose yourself from the grips of these people who are attacking your software?

Christina Morillo Pay the ransom rate, which is risky because the criminal or the attacker can decide not to provide the key. They can decide, Oh, I got your money, sucker, and I'm not going to give you back your data, right? Or they can say, you paid me. I don't know. One hundred and fifty million dollars. And so here's a key, and here's access to your data. Maybe, maybe not. You never know. There's no guarantee it doesn't come with a warranty. The other option is that companies or individuals do not pay the ransom, and then they do restore order data from their backups because they were smart and they did have backups. But the risk there is that whatever information the attacker collected can now be leaked and sold on the dark web.

Titi I don't have a hundred fifty million dollars.

Zakiya I don't either.

Titi Do you have it?

Zakiya No.

Titi OK. That's what-- I didn't want to assume. But--.

Zakiya Now, you know.

Titi We don't got it.

Zakiya You know how I live and you know I do not have 150 million dollars.

Titi I didn't want to assume.

Zakiya Or one-hundred fifty thousand either. OK. And I think the other thing is, if I had to live off my last backup, I might as well start over.

Titi Yeah, just give me a brand new everything. Right before my qualifying exam, I had to write a portion of my dissertation and I lost the whole thing because my hard drive crashed. I had an external hard drive. That thing broke and I basically had to start all over again, and that's when I started using the cloud. Yes, but now even the cloud ain't safe because we've seen celebrities clouds get hacked and you know, some of their racy photos make it out to the common man. Yeah. And so it ain't safe anywhere. And so the next thought is, how do we avoid these problems in the first place? Yes. How do we get to a place where we are aware of all these goings on and protect ourselves?

Christina Morillo Cyber awareness is pretty much kind of like the education piece of that, right? So it's like, what do we need to do to protect these systems or what do we need to do to? Protect our networks, our software applications. What does that look like in real life?

Titi And it's all about taking these small steps everyday to start building that awareness around our data to know what's important, what you should be protecting. Things that don't feel important to you may be useful to someone else.

Christina Morillo Think about it like you're protecting yourself. When you come home at night, you lock your doors, right? Just kind of taking those small steps where make sure your passwords and your accounts, your bank accounts are secure.

Zakiya Christina gave us some really good advice. You know, don't share your password.

Titi But another thing is that you shouldn't use the same password for everything. Now this I know lots of people have it. Probably, you know you got a different password for everything. How are you going to remember what it is for each thing? Some things do have like a multifactor authentication.

Zakiya I love that.

Titi Me too. They'll send you a text message or an email that says, Hey, here's this code. Put it in so that we can verify that it's you and not somebody else that's trying to log into it.

Zakiya We just press, yes, push it directly to my device. Christina also told us not to place sketchy games.

Titi Yeah, like those website that lets you play blackjack and stuff like that,.

Zakiya Right? Because some of those games are actually tied to bank account information. So it's different if you're just accumulating coins that are not real. But once you start tying bank info, that feels a little dangerous.

Titi I know this is going to be hard for you, friend.

Zakiya Yes, you know, I like that.

Titi And the last thing was, don't give out personal information like your address on social media, because once it's online, it's there forever. You might delete the tweet, delete the Instagram post. Those pixels exist in perpetuity for all time. Yeah, so you have to be really, really careful about what you're putting out on the internet.

Zakiya All this is telling me is that we must remain diligent when we are using these devices. Just think about how easy it is to just zone out online or on social media and just click click mindlessly scrolling.

Titi I have fallen asleep scrolling on Instagram, and I have almost purchased something. I was like, Why does it only take three taps to purchase something?

Zakiya It's so easy to almost retweet a thing and almost click a link, and we could really compromise something in our personal and because we're all working from home now professional to in our personal and professional lives.

Titi We're spending a lot more time on the internet at home, so we're fill in a little bit more relaxed, a little bit more comfortable, so a lot more susceptible.

Christina Morillo As employees, we basically have professional responsibility to keep the security and privacy of our company and customer data. So whether it's our information or employees information, we need to make sure that we are doing the best and everything that we can to ensure security and also companies have also a responsibility to provide that cybersecurity awareness. Talk about, Hey, this is what we value. If you're on your computer, please refrain from using using it for your personal matters, et cetera. So it really depends on the company. But I think education is a big part of it because there's only so much that we can do from a systemic point of view.

Zakiya And like you said, you're also more relaxed when you're working from home. It's easy to click on stuff when I'm in my pajama pants.

Titi Absolutely. I got my bonnet on, my at-home glasses.

Zakiya Different glasses for at home.

Christina Morillo It really depends on what in the security community we like to call your threat model.

Titi That sounds scary.

Zakiya Threat modeling sounds like now we're really in a spy movie. Threat modeling is a process that identifies security vulnerabilities and countermeasures to manage risk.

Christina Morillo Who are you? What do you do for work and what are you trying to protect if you're a diplomat? What you need to protect is a little bit different than, let's say, a mom or just a banker, a teller. So it really depends on who you are and what the risks are of you being attacked.

Zakiya Listen, I may not be a diplomat, but that doesn't mean I want people going all through my cookies, and I don't want my data to be up for grabs.

Titi That's right.

Zakiya And Christina says one of the best ways to protect your data is just to make sure you have a backup.

Christina Morillo Have a backup, always have a backup of your information, right? Same as when you have your credit cards in your wallet. You should always have a copy or something, or at least know what you have in your wallet so that if your wallet gets lost, you can call and cancel, right?

Titi OK, so we have to backup everything on every device. For a lot of us, that means our computers, our phones and any other device that we use every day. For companies that could end up being a lot of data that needs to be backed up depending on how many employees they have.

Christina Morillo They need to have a backup of their environment, have a backup of their valuable data, their, you know, secret sauce, their customer information, whatever it is that makes the business run or that allows a business to run, they should have a backup. Unfortunately, many companies and many individuals do not have a backup. So what that means is that if they do get ransomed and their files are locked or encrypted, then they cannot recover.

Zakiya This has been eye opening for me. I feel like I have a lot of apps I need to delete. I have a lot of practices I need to change and a lot of passwords that must get updated right away.

Titi I'm really just going to take the time and go through each thing and change my password. It's. It's time. It absolutely is time, and I think that the advice that we got from Christina was really, really important, and I think that everybody should be trying to do that so that we can, you know, fend off these attackers.

Zakiya Yeah. You know, she said the internet is like the deep sea or deep space where we only know a very small percentage of it. And let me tell you something, I don't want to meet the dark web. OK, I want to stay right here in this galaxy.

Titi The light web.

Zakiya Yes, now I want to step into the light, Carolyn. OK? And I do not want my information all out there in those streets.

Christina Morillo We just have to stay alert and we have to stay vigilant to keep ourselves and our companies or just personal information safe, as safe as possible to get in.

Titi All right, it's time for one thing. What's your one thing this week?

Zakiya I hope my one thing is our thing. Yes, this is an event called Dope Labs and plug in is with the Boston Museum of Science on Thursday, April 14th. Guess what? It's free. 99, so all you have to do is register, and you can join us in person in Boston, April 14th at seven p.m. We're going to have a live show. Come get these laughs and these facts in person.

Titi We want to see y'all's faces, come!

Zakiya That's it for Lab 055. I hope that after listening to this episode, you're going to do something a little bit different. Maybe change those settings on your phone. Call us at 202-567-7028 and tell us what you thought or give us an idea for a lab. You think we should do this semester? We like hearing from you, so call us. That's at 202-567-7028.

Zakiya And don't forget, there's so much more for you to dig into on our website. There'll be a cheat sheet there for today's lab and additional links and resources in the show notes. Plus, you can sign up for our newsletter, so check it out at dopelabspodcast.com ! Special thanks to today's guest expert Christina Morillo.

Zakiya You can find and follow her on Twitter and Instagram @divinetechygirl

Titi You can find us on Twitter and Instagram @DopeLabsPodcast.

Zakiya And Titi's on Twitter and Instagram @dr_tsho.

Titi You can find Zakiya on Twitter and Instagram @zsaidso. Dope Labs is a Spotify original production from MEGAOHM Media Group.

Zakiya Our producers are Jenny Radelet Mast and Lydia Smith of Wave Runner Studios.

Titi Editing and Sound Design by Rob Marczak.

Zakiya Mixing by Hannis Brown.

Titi Original Music composed and produced by Taka Yasuzawa and Alex Sugiura from Spotify. Creative producers Candice Manriquez Wrenn and Corinne Gilliard. Special thanks to Shirley Ramos, Yasmeen Afifi, Kimu Elolia, Teal Kratky and Brian Marquis.

Zakiya Executive producers for MegaOhm Media Group are us.

Zakiya Titi Shodiya.

Zakiya And Zakiya Watley.