

The Tim Ferriss Show Transcripts

Episode 74: Samy Kamkar, Part 2

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Tim Ferriss: We are back, after a bathroom break and an alcohol refill, with Samy. Samy, how the hell are you?

Samy Kamkar: I'm great.

Tim Ferriss: And: hey, I promised the fine people at home that we'd talk about Myspace. So I don't even know how to introduce this story. Tell me a little bit about your involvement with Myspace.

Samy Kamkar: Okay. So my involvement: I was a user of Myspace. So, back in the day – this was ten years ago, so I was 19 at the time. And this was 2005. Myspace was the No. 1 site on the Internet. No 1: above Google, above anything else. And I thought this was interesting: this is kinda cool. And all of my friends used it. Pretty much all my friends used it. And I hadn't used it yet. And I thought, "Okay. Everyone's using it. I should get on here, see what it's about, right? A little social proof; check it out."

And I created a Myspace, added a couple of friends, made a profile. I was like, "This is kinda cool." And I'd started uploading photos. I finally had a digital camera. And I took a bunch of random photos of my friends and would post them. And once I uploaded the 12th photo and I tried to upload the 13th, it said, "You have hit our limit." Now, today, that's insane. That's insanity. If a website told you – if Instagram said, "Oh, 12 photos? You've hit our max," no one would use it.

Tim Ferriss: Yeah. It'd be gone.

Samy Kamkar: Right. But, back then, it wasn't relevant. Not that many people had that many photos. I mean, digital cameras were getting cheaper, but, for the most part, that wasn't an issue. And I thought it was an issue. So I said, "Okay, well how do I get around this? I don't like having 12 photos. I want 14. I think that's a solid number."

And I found a way to upload a 13th photo. So I uploaded a 13th. And it wasn't a big deal. I didn't like the limitation so I went around it. And on the front page you have a sort of description of

yourself, like your bio, your relationship status, your favorite books and stuff. And I thought, “Okay. Well, it would be cool to change the relationship status.” I was dating someone, and so I had “In a relationship,” and that was a drop-down. You could choose from: “Single,” “Divorced,” “Married,” etc. And I thought it would be funny if I could change that to: “In a hot relationship.” Subtle change, but if someone saw it, that’d be funny. They might think it’s interesting or funny. At least I do.

And they wouldn’t let me do that. So I thought, “I wonder how I could get around this.” So I played around on the website. You know, I –

Tim Ferriss: How old were you at the time?

Samy Kamkar: I was 19. So my second year of my company. So I was working full-time in LA.

Tim Ferriss: What did your company do?

Samy Kamkar: My company did, and still does, phone systems. So: cloud-based – actually, now, it’s cloud-based phone systems. But we started a voiceover IP company called Fonality about – wow – 11, 12 years ago now.

Tim Ferriss: That’s like 700 Internet years ago.

Samy Kamkar: That was so many Internet years and cats ago.

Tim Ferriss: So you were 19.

Samy Kamkar: Yeah. I was 19. And I would work sorta night and day. So I’d actually go to work – go to the office, come back at night, and I’d play around on this Myspace site, because that was the cool thing at the time. That was the hip thing. So I was messing around on the site and I finally found a way that I could execute JavaScript. And JavaScript is a web coding language. And JavaScript allowed me to modify the page. So Myspace allowed you to insert JavaScript, but I found a vulnerability within the Myspace filters, and within web browsers, that allowed me to inject JavaScript. And this allowed me to just modify the page more than you’d be able to.

Unfortunately, Myspace gave a lot of creative freedom back then, so you could actually make the page look really ugly, but not do things like change the relationship status like I wanted. So once I

figured out I could do this, I actually realized: “This exploit I found is actually extremely powerful. I can actually do a lot more. I can make the user do virtually anything in the web browser without their consent. I could, in fact, steal their bank details. I have no interest in their bank details, but I could take their bank details and have a bunch of people’s bank information.”

So what I found was that whenever someone visited my profile, I could make it say, “In a hot relationship.” And I was like, “That’s cool. What else can I do?” And I played around further and further. And finally I realized: “Well, I can actually – since I can control their browser, I can make them add me as a friend. It’s kinda funny. So if someone visits my profile and they’re not yet my friend, they just add me. It’s just cute. I’m just playing around on here. It’s a social network.”

The next day, I had one new friend. And I was like, “Well, that’s not that cool. What else can I do?” And there’s different sections. For example, your favorite books, movies, TV, heroes. And I thought I’d be funny if I added something. And there was this heroes section. Most people didn’t use it, but some people did. And you could list your favorite heroes. So someone might have like Buddha and Tim Ferriss as their heroes. Some people might not. I’m not sure.

So I found a way that, when someone would visit my profile, not only would they add me as a friend, but they would add me as a hero. And it wouldn’t delete their existing heroes. So if their heroes said, “My mom, my dad, and my grandma” –

Tim Ferriss: And Samy.

Samy Kamkar: – it would append to the end – “My mom, my dad, and grandma, but most of all, Samy is my hero.” It would append that to their heroes section. I thought that was kinda funny. I thought this would happen to a couple people and I’d show off to my nerd friends and we’d get a laugh and that was that.

And the next day – I had so few friends on there that one person had hit it and one person had this. I was like, “Man, how do I make this go a little faster? I just wanna show a few friends: ‘Hey, I made ten people say this on their profile.’” So I thought, “Okay, well, if I can make someone add me as a friend, and I can make them add me as a hero, well, the code’s on my profile. I could probably make them add the code to their profile.” So, Tim, if you visited my profile, you would add me as a friend and add me as a

hero. But you'd also add the code to your profile. If, then, someone visited your profile, they would add me as a friend, add me as a hero, and also, the code would go onto their profile.

So it became a worm. I believe that's like the technical definition of a worm or virus. And it's not a big deal –

Tim Ferriss: Are worms and viruses different?

Samy Kamkar: Oh, man. That's a good question. I'm not sure what the technical difference is. I think – usually when they're referred to, at least online that I see, viruses – or virii – are usually referred to when they're malicious and destructive. And worms are – they just spread really quickly, and not necessarily –

Tim Ferriss: With malicious intent.

Samy Kamkar: Not necessarily with malicious intent. But I guess there aren't too many things out there that spread without malicious intent.

Tim Ferriss: Not to interrupt, though. So, all right, you were like, “Hey, let me make this move a little faster.”

Samy Kamkar: Yeah. So I made it move a little faster. And I figured, “Okay. In a month, maybe I'll have like 50 new friends and heroes, and someone will complain, right? Someone unintended will hit and complain and Myspace will remove it.” That sounds like not a big deal. And I put this worm on my profile. And I woke up and thought I'd have like probably four new friends. And I had 200. And I said, “Oh, shit.”

And an hour later I had another 200. And I said, “Oh, no.” Because, after eight hours, it was 200, but it was exponential. So at first I thought it was: oh, gonna be 1000 in a day, after I saw the 200. But no: it's exponential. An hour later I had another 400. An hour later, another 800. These are people who have A) add me as a friend, and then B) add “Samy's my hero” to their profile. And then the worm spreads to them.

And it wasn't malicious, right? There was no malicious intent. It's clearly a prank gone wrong. And I didn't know what to do. So immediately I emailed Myspace anonymously. And I said, “Hey, something weird just happened to my profile. Someone just added me. Their name is Samy. And it says, ‘Samy is my hero.’ And I found this weird piece of code that's on my profile. And it seems

to do this”: detailed explanation of exactly what this crazy big piece of code is doing.

Tim Ferriss: “I’m no professional, but here’s my – this slice of code appears to be doing the following 17 things.”

Samy Kamkar: Yeah. “If I had to make an assumption about this obfuscated piece of worm – and I think you can fix it most easily and efficiently by doing this one simple change. This is what I’d suggest: one simple change to stop it in its tracks.” I don’t know if it ever got to anyone. I have no idea, to this day.

An hour later went by. It doubled. And I figure: at some point, it’s going to stop, right? At some point you’re going to hit a maximum. Because there are only so many people on Myspace, right? You can’t get it twice. You can’t get the cold twice, at the same time, right? So you’re going to hit a max and that’s going to be that.

So at about 1000, I think it was gonna max out. And I get to work and it’s 2000. And I’m just refreshing. And I’m like, “Man, okay. I should at least delete my profile.” I was like, “Man, I should delete the worm.” So I immediately delete the worm. But, like a cold, *you* might be cured, but you’ve spread it. It doesn’t matter. All these other people now have it. And you can’t stop that.

For a moment, I thought, “Okay, maybe I should write another worm that then transmits to all these people and then deletes the first one.” And I thought, “I shouldn’t write two worms in like a 24 hour period. I don’t think that’s a good idea.” So I just kinda waited around. And I did send that anonymous email. I tried to get it to stop. There was not much I could do at that point.

I did wait more. It jumped to 2000 and then 4000, then 8000. So now there’s 8000 people that says, “Samy is my hero” on their profile. And now I’m getting messages from people. Because they’re deleting me. They’re like, “Who’s this Samy guy who’s on my profile?” So they delete me. Which, when you delete a profile on Myspace, it immediately takes you back to your profile, where the code is, which re-executes and re-adds me.

Tim Ferriss: They must’ve loved that.

Samy Kamkar: And that was an accident. I mean, in software you call it a feature, when you have a nice accident like that. So you can’t delete it, really.

And it's spreading further and further and further. And I don't know what to do. Just a 19-year-old kid trying to build some software at a VOIP company – voice-over IP. And it just kept going. I decided, "Okay. I'm gonna have" – I called my girlfriend at the time. I said, "Hey, let's have lunch." She's like, "What's wrong?" I was like, "I just wanted to see you."

So we had lunch and I said, "I don't know what's gonna happen. But this worm thing happened on Myspace, and it's been growing pretty quick." And also there's this company called Fox that had purchased Myspace maybe two months prior for over half a billion dollars. So I don't know what's gonna happen. I don't know if Mr. Murdoch was very happy about this, in his brand new company.

So I had lunch with my girlfriend. I went back to work. And now it's probably at 40,000 people: 40,000 people infected with this. And I'm just like, "Myspace, please stop." So I'm like, "Okay. Let me delete my profile so this picture is gone." And I delete it, and it says, "Are you sure you wanna delete your profile?" I was like, "Yes." It's like, "Are you absolutely sure? You cannot undo this." I was like, "Yes." It's like, "Okay. We are deleting your profile in 24 hours." And it's like, "What?" So now all these people are still – the profile's still fully up. I can't do anything about it. It's locked now. And online. I said, "Okay. I just have to wait it out." Literally wait it out.

So I just sit through the day. Can't really do much, can't really think clearly. And by the time work is done – like it's probably time to go home – I have, I don't know, half a million followers on Myspace now, that all say, "Samy's my hero." And I go home. And before I go home – it's probably my last meal. So I go to Chipotle, have a burrito. It's gonna be my last delicious dinner. And I drive home. I hope the browser. 900,000. And I'm like, "Oh my god. I didn't even know there were this many people on Myspace. This is insane."

At this point, I refresh. And now I'm just purely interested in: how quickly is it growing? So I'm now refreshing every second. I was like, "I'll take a snapshot every second." But browsers didn't load that fast back then. So I take a snapshot every three seconds. And it was going 2,000 or 3,000 people per second. That fast. I mean, it's insanity.

And it hit a million. I took a screenshot. To say: “Okay, cool.” Still scared. Don’t know what to do. I have nothing to do. There’s no way to solve this. I made a horrible mistake.

Tim Ferriss: Right. Created a monster.

Samy Kamkar: I’ve created a monster. Yes.

And, at about 1,050,000, I refresh my profile and it says, “This profile’s been taken down.” And I say, “Halleluiaah. It’s gone. It’s down. They took it down. Thank you.” And I was like, “I wonder what happened to the profiles that also said, “Samy’s my hero.” I wonder if they removed it. So I go to another profile. It says, “This profile has been taken down temporarily.”

Tim Ferriss: Uh-oh.

Samy Kamkar: No. So I go to Myspace.com. The site is down. “The whole team is here working on it.” That’s what it said. The No. 1 website on the Internet in 2005. And I felt bad. I felt awful. Because: A) I know what it’s like to have a website, a company, that’s down. I know what that’s like. It’s an awful feeling, an emotion that I would never wanna put onto someone else. And I had done that inadvertently. So immediately I’m like, “I need to bring coffee and donuts to these people.” Because they’re in LA. I’m in LA. I’m like, “Maybe I shouldn’t go there and just – maybe I shouldn’t go there right now. I don’t know if security’s gonna tackle me or what.” So I just sat around. And a day went by and a week went by.

And I thought, “Okay. I have two options. Maybe I can – I can talk about this or not.” And I didn’t really say much about it. And someone emailed me and said, “Hey, I saw this thing on Myspace. Did you make this?” I couldn’t really hide because: A) I wasn’t trying to be anonymous. It was a prank that had gone horribly wrong. I said, “Sure.” And I did a little interview, and I did an interview for a couple different little websites. And someone was like, “Hey, do you wanna do an interview for our site?” And I was like, “Who’s it for?” And they’re like, “Wired.” And I was like, “Oh. I don’t know.” And I –

Tim Ferriss: “I’ve heard of you guys.”

Samy Kamkar: “I’ve heard of you guys.” Yeah. I never heard from Myspace. And a week went by and two weeks went by, and someone asked, “Hey, people are selling shirts that say, ‘Samy’s my hero.’” I’m

like, “That is awesome.” “Are you making money off that?” I’m like, “No, but that’s okay. That’s acceptable. Good in my book.” And a month goes by, two months. Three months go by, and I’m pretty stoked. I have a company that’s –

Tim Ferriss: Feeling free in the clear.

Samy Kamkar: I’m feeling free. I’m feeling great. Like: “Never doing that again.”

And six months go by. And I’d just bought a new car. Company was doing well. And at this point I walked down to my car. I’m gonna drive to work today. It’s six months later from the worm. And there’s two guys standing next to my car. And I’m like, “Oh no. I’m getting car-jacked.” And I walk up to them. And they’re like, “Samy?” They say my name. “Samy?” And I said, “No. Carjackers don’t know your name.” And two guys walk up behind me –

Tim Ferriss: These are very well-educated carjackers.

Samy Kamkar: Yeah. “No, it’s not on my license plate.” And two other guys come up behind me. And they say, “Samy, we have a search warrant for you.” And I was like, “What?” And they all show me badges. And one shows me: Secret Service. One shows me: Electronics Crimes Task Force. Another shows me: District Attorney, LA DA. Another shows me – it was LAPD. They say, “We have a search warrant.” And I don’t know anything about law or search warrant. I’m a high school dropout, right? I served maybe one year in high school.

Tim Ferriss: “Served,” like a prison sentence.

Samy Kamkar: Yes. I did. I did a bunch of homework and I did some of the tests. And they said, “We have this search warrant.” And I’m like, “What can I do? What can I do?” And I recalled an episode of *24* where they said, “Show me the search warrant.” So I said, “Show me the search warrant.” And I don’t know if that actually applies in law, or if it was like CGI.

Tim Ferriss: They’re like, “What? Excuse me.”

Samy Kamkar: Yeah. They’re like, “Wait, what? Oh, okay. It’s upstairs.” I’m like, “Oh, okay.” And they started talking to me. And they didn’t mention any specifics. And I was hoping it was Myspace, actually, at that point. As a hacker, you play around and you go through

different things maybe you're not supposed to go into. Never malicious, never causing harm. But you wanna see what you can get into. It's a puzzle. It's a real-world applicable puzzle: what you can break into.

And after about half an hour, I'm like, "Guys, do your search. I'm not gonna obstruct. Just show me the search warrant and do your thing." So we go upstairs, these four guys and me. And we walk up to my place. And my girlfriend's wrapped in a sheet, crying. And my roommate is wrapped –

Tim Ferriss: This is in your apartment.

Samy Kamkar: In my apartment. Yeah, my apartment at the time, in the marina – Marina del Rey. And my roommate – good friend of mine –

Tim Ferriss: It's your naked, weeping girlfriend. Good start.

Samy Kamkar: And my roommate – he's in a bath towel and wet.

Tim Ferriss: What is going on here?

Samy Kamkar: Yeah. At first I suspected something. But she was in bed in my room, and he was in the shower getting ready for work, when a dozen agents busted into my apartment – that I had not known. So while I was going downstairs –

Tim Ferriss: Oh, so while you were down at the car, they were already going into the apartment.

Samy Kamkar: Exactly. While I was downstairs, unbeknownst to me, they were in my apartment, going through everything.

Tim Ferriss: Oh God.

Samy Kamkar: And they finally handed me the search warrant and I read through it. And it finally mentioned something of Myspace. And I was like, "Okay. It's Myspace-related. Obviously." And after that they just went through everything. And from my roommate and girlfriend's perspective, they just came in with guns. It finally – finally something in the movie, *Hackers*, was real. Like: a dozen agents busting into your place to get a computer crime guy with a bunch of semi-automatic weapons. And what am I gonna do with like a DVD? Throw it at you? I'm not sure.

But they had this search warrant, and it said they could pretty much take anything that had data on it. So they took my computer, my laptop, my iPod, my Xbox, any CDs, DVDs, and sat me down. And I'm reading the search warrant further and further. And finally it comes to this part, and it says they can search my body, my car, my home, and this other address. I'm like, "What's this address? Oh no. My company."

Tim Ferriss: Oh...

Samy Kamkar: And at this point, this is two years in. Probably had 30 employees, investors. It was a legitimate company. A legitimate tech startup that companies depended on for their phone service. A decent number of companies depended on us. And I was like, "You guys are going to my company?" And they're like, "Oh no. We're already there." Now, I never knew this – I heard this secondhand from 20 people. But simultaneously, another dozen agents went to my company, and said, "Who runs this place?"

And Chris, the CEO, came out. And they said, "What does Samy Kamkar have access to?" And he said, "Well, yeah, he's the cofounder. I mean, everything." And the guy looks back at another agent, says, "All right, guys. Take everything." And I'm like, "No!" Right? I don't know what Chris did. I don't know what he did. But for two hours, he somehow – and Chris is – he like mentored me for years. Chris Lyman – this guy's awesome. And taught me so much about –

Tim Ferriss: "These are not the drones you're looking for."

Samy Kamkar: Yeah. I don't know what magic he used, because I didn't have any. But he got them to, ultimately, not take the server room, and turn down, essentially, all these companies that are depending on a phone system for their company, that are call centers. They didn't take down all these companies' call centers. Instead, they just took my computer and my phone. And put everyone in the conference room. And had guns out and said, "Get off that keyboard."

Tim Ferriss: That's terrifying.

Samy Kamkar: Yeah. A friend of mine, it was his first day. One of my best friends. It was actually – we met online in a forum or something. And he emailed me, and –

Tim Ferriss: "What did you do today?"

Samy Kamkar: “What did you do today? What’s the most interesting thing in your week?” “Let me tell you a story.” And I said – I convinced him to leave his job in Denver. And he came out with a U-Haul to come work at my company. And I said, “Hey, while you’re – come stay at my place.” So he was actually crashing at my place. He didn’t run into the secret service because, in my apartment complex, we had two garages: one for guests and one for residents. So I went to the residents’, where they were waiting. He went to the guests’, drove to work, didn’t know anyone. It was his first day. It was Monday.

So he goes to shake his hand to someone, and she’s like, “Hand off the mouse and keyboard. Go in the conference room. Secret service.” And he’s like, “What?” And he has his U-Haul out back. Poor Matt.

Tim Ferriss: With all his crap.

Samy Kamkar: With all his crap. He had just quit his job, drove out from Denver to this company that – he met me once.

Tim Ferriss: It’s like J.T. Marlin and Associates from *Boiler Room*.

Samy Kamkar: He’s so pissed. I hear this, later on. He’s like not talking to me for a little bit. Comes out to this company that he thinks is getting shut down. No one has any idea why a dozen agents are at their company. Nobody. They just know my name was said, they took my computer, and they left. Poor guy. He didn’t know what to think. I explained it to everyone. And then it’s like, “Oh yeah. That’s weird. That’s funny but unexpected.”

So they took my computer. The worst part was they took my iPod. That was probably the worst, because all my music was on my computer and my iPod. It was just really hard to get music back then.

So I then got a lawyer. And, for six months, I fought with the DA. And part of me was like, “Well, I think it was a bit much. I did something wrong. There’s no doubt about that. I wouldn’t do that again.” But they were being – it was very harsh. I felt it was very harsh. And what they were trying to do was take away my computer use for the rest of my life.

Tim Ferriss: For the rest of your *life*?

Samy Kamkar: For the rest of my life. So, again, I didn't have a high school diploma. I help my mom. I send money to my mom. I moved out when I was 15, and I think I forged emancipation documents so I could actually live by myself and get a cell phone and an apartment. And I had to support myself and help support her a little. So I couldn't do anything. If I couldn't touch computers, I don't know what I'd do. I'd have to – I don't know – finish high school. I just couldn't imagine that.

Tim Ferriss: Yeah, well, in this day and age also, I mean, just with the exponential growth of these technologies, how can you possibly avoid not touching a computer? I mean, you would have to just go into – live in Pennsylvania with the –

Samy Kamkar: The Amish, yeah.

Tim Ferriss: – the Amish, yeah.

So they were trying to take away your access to computers for the rest of your natural life.

Samy Kamkar: Correct. I mean, at first it was like they were talking about prison and all these things. I don't know if they were scaring me or what. But ultimately, I had a choice. I could spend a lot of time and a lot more money fighting it. I had spent all my savings – I was 19 – to fight this and get a good lawyer. Ultimately, we were able to come to an arrangement. And that was an agreement where I would not be able to use computers for the rest of my life. However, I would go on probation and I would visit a probation officer once a week. And if I were on good behavior, I would be able to get that reduced. I would be able to get it even potentially removed.

And it was within reason. It was like: if I don't commit any crimes or release any other worms, then I would be able to get that removed after a few years. It was like, "Okay. That's reasonable. I can focus on my company right now." At that point it was bigger. It was another six months later and I had a team, and I could communicate with my team every day. And I could actually work without necessarily using the Internet and doing that much on the Internet and on computers, and just manage, right? And at that point I kinda just managed. And I took that agreement.

And after three years, I went back to court and I said, "Hey, my probation officer loves me. I paid all my restitution. I've done my 720 hours of community service picking up trash. And, because of

some – they didn't document it properly, so I did another few extra hours. You're welcome." It's like 800 hours.

Tim Ferriss: Uncle Sam, that one's on me.

Samy Kamkar: It was like 800 hours later. I was like, "Wait. What? Oh, man, all this time." 5:00 a.m. every Saturday. It means I didn't – oh, it was awful. It was tough.

Tim Ferriss: Did you have to wear an orange jumpsuit?

Samy Kamkar: Yes. It was – I would park my car, put on an orange jumpsuit at 6:00 a.m., and then walk to the waste refuse management facility. I made friends with the guys who ran it, though. They were actually pretty cool. And I would – because they liked me, they would let me go on the trash runs, where we would drive around Santa Monica. And that means we go to see the ocean a lot, and drive a dump truck, basically, picking up trash. You'd think I'd be able to help more effectively. I'd be happy to help in other ways. But –

Tim Ferriss: That was the task laid before you.

Samy Kamkar: Yeah.

Tim Ferriss: So you did your community service, your restitution. So, after three years –

Samy Kamkar: I went back to court. And I said, "I'm a model computer-not-touching citizen. And I would love to get some of that access back." And we got everything removed. And I was able to touch computers again. Just kind of randomly one day, everything came back. I could touch computers. I wasn't a felon. I had no more probation. I had no more community service.

Tim Ferriss: Now, what was it like after three years, in technological time, to get back up to speed?

Samy Kamkar: I was probably 22 or 23 at this point. And I think it was really cool, because it was very fortunate: the thing that I had exploited when I wrote the worm was something called AJAX. Or some people call it Web 2.0. And I don't know if you remember, but this was right when Google Maps came out. Before we had MapQuest. And what would happen on MapQuest: you'd go somewhere – you'd make directions. And if you wanted to zoom out, you'd click a button and it would refresh the page.

Tim Ferriss: You had to click the plus or the minus.

Samy Kamkar: Exactly.

Tim Ferriss: Huge pain in the ass.

Samy Kamkar: And the page would refresh. And if you wanted to go right, you couldn't scroll right. You'd hit a right arrow.

Tim Ferriss: What is AJAX? Asynchronous – help me out here. No.

Samy Kamkar: I believe it's Asynchronous JavaScript A-X.

Tim Ferriss: There we go. A-X. Armani Exchange.

Samy Kamkar: Yeah. Exactly. I believe that's Amex. RX. Sorry. That's American Express. My bad.

Tim Ferriss: So were you able to catch up quickly after that – ?

Samy Kamkar: So the worm that I wrote actually abused or used AJAX. Because I saw Google Maps came out. And you could scroll your map. It was amazing. You could scroll. You didn't have to refresh the page every time you wanted to go right. This was the coolest thing on the web at that point.

Tim Ferriss: Yeah. And for people listening who may not be familiar with the term, "AJAX" – and please correct me I'm wrong. I've had plenty of wine, which leads to overconfidence in matters of my total incompetence. But AJAX would be, for instance, where you select from, a drop-down, an item – let's say if you're buying a domain name – and you're able to see that value change on the page without refreshing the page.

Samy Kamkar: Exactly.

Tim Ferriss: That would be a consumer experience of AJAX.

Samy Kamkar: Right. It used to be you'd have the refresh. You might here the click whenever that information would get refreshed. And now you can just seamlessly get new information on your page, of updating without you changing pages, right? Without the whole thing refreshing. It was beautiful. And I used that so that – because I could write the worm in a way that it would refresh the page, but that's just annoying. I wanted it to happen in the

background. The user shouldn't be bothered that there's a virus running on their computer. It should just happen seamlessly.

Tim Ferriss: It should be very comfortable –

Samy Kamkar: Correct.

Tim Ferriss: – infiltration.

Samy Kamkar: Yeah. It shouldn't cause them harm. Or annoyance. And man, that click's annoying. So that was AJAX.

And by the time I came back to computers – this was three years later – something had come out called – drumroll – the iPhone. Nothing had change between then. I mean, for the most part, the biggest technologies to hit tech was Web 2.0, two, three years later: iPhone. So I came back. I was standing in line at the Grove, waiting for the iPhone.

Tim Ferriss: So you really, in a way, threaded the needle. I mean, you exited and then re-entered the scene in such a way that you really didn't miss a lot of the major developments.

Samy Kamkar: Yeah. I wish I could say that was by design.

Tim Ferriss: Well, what is it? “If I could be good or lucky, I'll take lucky”?

Samy Kamkar: Right. But I will say this: before then, I was really introverted. I was an introverted nerd. And I'm still a nerd. And I love that. But those three years, I wasn't allowed to touch computers – the thing that I spent my night and day, ever since I was nine years old and got kicked out of a chat room. That changed my life. I had to spend my time doing something else. So, during the day I was working. But, at that point I was 20. I turned 21. So I started going out. And then I started making friends and communicating and socializing.

I went out and I said, “What is that thing? What's that bright thing? Oh, it's the sun.” I started going outside and doing all these outdoors things. And I learned about what a gym was. And I did these things because I had nothing else to do, right? The one thing was taken away. I mean, they took my Xbox. That's not cool. But I was like, “Okay, let's roll with it.” And I think life is good. Life is good no matter what. At least here in the U.S., I feel pretty fortunate. We have other facilities available to us, so let's use those.

Tim Ferriss: Now, Kamkar, just for those people wondering: ethnic background is?

Samy Kamkar: Iranian. So yeah: my mom is from Iran. My dad is from Dubai, but also Iranian. And they came to Pittsburgh to study. They came to the U.S. to study.

Tim Ferriss: Carnegie Mellon, or – ?

Samy Kamkar: Down the street, University of Pittsburgh. I would have suggested Carnegie Mellon. [Inaudible] tech.

Tim Ferriss: What were they studying?

Samy Kamkar: My dad, I believe, was business. My mom – I’m not – telecommunications, I think.

Tim Ferriss: Got it.

Samy Kamkar: And ultimately –

Tim Ferriss: How did they choose Pittsburgh, of all the places in the U.S.?

Samy Kamkar: That’s a great question. I have no idea.

Tim Ferriss: One of the unsolved mysteries.

Samy Kamkar: Right? Yeah. One of these things. I mean, little kept secret about Pittsburgh: good sandwiches.

Tim Ferriss: Good sandwiches. It’s like hoagie haven at Princeton, for all those Princetonians listening.

Samy Kamkar: Delicious kabobs. But yeah: they went to school there. And my dad left when I was younger. And yeah. They’re from Iran. I was born like a year later, after they came here. My mom was probably 20. Had me kinda young. And I grew up in Pittsburgh.

Tim Ferriss: What – or I should say “Who” – who were some of the people, whether you met them or not, who most influenced your trajectory through life? Besides your parents?

Samy Kamkar: That’s a good question. I would say it changes over time. Man, I love – there are so many people out there who’ve done such amazing things, or even just have a really cool perspective of the

world. So I try, if I can – if I’m fortunate enough, I try to glean some information from people when I can. I’d say it started – when I really – the available information on the Internet, right? Just the Internet itself. I think it was Al Gore who created the Internet. That’s what I’ve heard, so –

Tim Ferriss: He did a great job.

Samy Kamkar: Yeah. He did a great job.

Tim Ferriss: He’s tightened it up.

Samy Kamkar: I mean, everything I’ve – a lot of what I’ve accomplished or am learning is from the Internet. So: thanks to that. But if it were people, then I would say, when I was young – when I was like 15 or 16, I got my first contract on the Internet. Just a friend of mine, someone I met online, who had taught me about business. When my mom told me –

Tim Ferriss: This was with the cheats, right?

Samy Kamkar: This was with the –

Tim Ferriss: Cheat codes.

Samy Kamkar: Exactly. Yeah. So I was writing these counterstrike cheats, and someone said, “Hey, do you want a job?” And this guy, Stan, he actually taught me a lot about business. Because then I needed a job. My mom lost her job, and she said, “Samy, you’re not going to school. You’re just playing games all day. You need to get a job and help pay rent if you’re gonna live here.” I said, “Okay.” So I was trying to fill out applications at Starbucks and Ralph’s.

Someone emailed me named Stan, and said, “Hey, I saw your cheat software. Do you wanna write software for my company? We’re doing some sort of game development stuff.” I was like, “Absolutely.” So I contracted with this guy and met him. And he was awesome. And he – at that point, I did a little contract for him. And then I was contracted for another company. And they wanted me to work full-time.

And my mom said, “Well, if you’re gonna work for a company full-time” – I was like, “Mom, what do I do in the negotiation when they ask how much? If they ask how much?” She’s like, “Just say whatever you want.” Or, “Just say – tell them this low number, and if they say that’s too much, just accept lower.” And I

had lunch with Stan. He's like, "Oh, so you're gonna tell them that you have a base expectation of 75K. And another that you have, that's what they're offering. And that you're going to get – the other offer has a five year stock grant, with 5000 shares. And that's what you want."

Tim Ferriss: And you're like, "I like Stan's advice."

Samy Kamkar: Well, I'm like, "I have no idea what you just said. And that's all bullshit." And he's like, "So?" And I'm like, "I don't have another offer. And I don't wanna lie. I don't wanna be deceptive." And I'll say that: besides fake profiles on OkCupid, the other time it's okay to be deceptive is during an interview. Because they're being deceptive to you probably. So: during your initial interview.

And so I went into this meeting as a 15-year-old kid, just repeating the lines. Because I had no idea what I was doing.

Tim Ferriss: You're just reading, verbatim –

Samy Kamkar: Exactly. Oh, absolutely.

Tim Ferriss: "The other offer has a five year stock grant."

Samy Kamkar: Exactly.

Tim Ferriss: "What say you?"

Samy Kamkar: Yeah. It had a six month cliff and a five year vesting period. I don't know what –

Tim Ferriss: Word salad.

Samy Kamkar: – anything.

Tim Ferriss: Hopefully that compels you to give me more money.

Samy Kamkar: I had no idea what I was saying. I didn't know a stock was. And I thought, in my head – the only reason I followed his advice was because he was a very smart and logical guy. I really respected him because of that. And everything he had told me, taught me – I mean, he was pretty much always correct about things. And I'm also okay with taking risks. That's acceptable. There's always another way to do something.

So I followed his advice and actually I went down for this meeting and they said, “Hey” – they had lunch with me, and I took the Amtrak to go see them in San Diego, this company that I’d been working with remotely. They’ve never met me. And I took the Amtrak down and was really hoping I got this job. We had dinner. It was really friendly and just kinda casual. And that was that. I was like – I felt like it was weird. It was a slap in the face. It’s like: we never talked about the job. We never talked about: am I getting this job? Are you guys gonna hire me? I really could use a job.

And I said, “So, guys, did you wanna talk about, I don’t know, salary?” And I was really timid. Another reason that not having a computer was awesome, because I was forced to talk to people.

They’re like, “Sure. Let’s talk.” And they’re like, “What would you like?” And I just repeated, verbatim, what he told me, what he taught me. And, “My base expectation is 75K. I have another offer for that at another company in LA. It would be better in LA, because I already live there.” In my head, I’m like, “Please let me leave” – not LA. I love LA. But, “Please let me move out of my mom’s place and get my own place. If I’m making 75K, I can afford a place.” And handle my mom’s place, right? And cover her. “And I have this stock, grant,” whatever, blah blah blah, word garble.

And they looked at each other and said, “Okay.” And I was flabbergasted. So what he – he taught me a ton in my early years. That was my first time in a real job, a full-time job. He got me a 40K a year raise.

Tim Ferriss: Now this was Stan who had hired you based on your cheat codes?

Samy Kamkar: Correct. Yeah.

Tim Ferriss: So he became a mentor, and then, for the next job, he was –

Samy Kamkar: For that job, he was my mentor. He lived in San Diego, so I hung out with him all the time. He was older. He was probably 30s.

Tim Ferriss: So he was helping you negotiate against his own company, or against different – ?

Samy Kamkar: No. I was contracting for him. I had written some software for him. That was that. He didn’t need a lot. So I helped him, did a

little contract. And after that we just remained friends. He was older guy, scientist, doctor; really smart guy.

Tim Ferriss: When you think of the word “successful,” who’s the first person who comes to mind, for you?

Samy Kamkar: “Successful.” Okay. There’s a lot of successful people. I guess it depends how you interpret success.

Tim Ferriss: Well, that’s up to you.

Samy Kamkar: Yeah. Lately a lot of it’s just: how can you remain happy? What can you do to actually increase your net happiness, while reducing the negatives in your life? And without hurting people? That’s kinda like – I don’t have many morals or ethics. I have one pretty strict rule, which is: don’t intentionally hurt someone.

Tim Ferriss: Is that Ahimsa? Is that what they call it? I think that’s “Do no harm.” It’s also the Hippocratic Oath, but yeah.

Samy Kamkar: Oh, no: do no harm intentionally.

Tim Ferriss: Right. Got it. Do no harm intentionally.

Samy Kamkar: There’s like a trail of fire, a scorched earth behind me.

Tim Ferriss: [Inaudible].

Samy Kamkar: But I’m just naïve to that fact.

Tim Ferriss: As long as it’s not intentional. Right.

Samy Kamkar: Right.

Tim Ferriss: No deliberate harm.

Samy Kamkar: It’s not you; it’s me.

Tim Ferriss: So who – ?

Samy Kamkar: Oh, man. There are people who I respect. I think everyone I meet has something to teach me. I think Richard Branson is really cool, just because every time I read about him or learn a little bit about him, he’s like having fun and has – he’s on an island or on a ship or racing across the ocean. I mean, he’s doing awesome things. He’s having fun. He’s not necessarily defining success or doing

things based off of what is expected of you, right? He's doing, I think, what he wants. And that's what I really like. I want to do things that I want, and have fun, and really enjoy my life. And maybe I can contribute in some ways. But –

Tim Ferriss: Who are some of the people who had the biggest influence...on your worldview, besides Stan? Let's just say: after Stan – is there is anyone who has had a – ?

Samy Kamkar: On my worldview.

Tim Ferriss: Yeah. Or just way of thinking about life. Are there other people – let's take it even more granular. In the world of – and this is a term that's become, unfortunately, very over-used – but in the world of hackers, right? People who are finding non-obvious solutions to problems.

Samy Kamkar: Sure.

Tim Ferriss: Is there anyone who had a particularly large influence on you?

Samy Kamkar: In the world of hackers? Kevin Mitnick was kinda the biggest well-known hacker. So I've always followed him.

Tim Ferriss: Sure. *The Art of Deception*. The business card made of lock picks. So amazing.

Samy Kamkar: But if I had to give specific people that I think are awesome, have been doing awesome things? Pablos Holman is one guy. He's part of this group called The Shmoo Group. And when I went to –

Tim Ferriss: The what group?

Samy Kamkar: Shmoo.

Tim Ferriss: Shmoo.

Samy Kamkar: S-H-M-O-O.

Tim Ferriss: All right.

Samy Kamkar: The Shmoo Group. And I found out about them when I was like – when I was a kid and when I moved to LA when I was 13, I –

Tim Ferriss: What was his name again?

Samy Kamkar: Pablos – P-A-B-L-O-S – Pablos Holman.

Tim Ferriss: I feel like I went to an event –

Samy Kamkar: Maybe.

Tim Ferriss: – where he spoke. And he had a device that he waved across the front row of the crowd, and captured all of their credit card information from their wallets.

Samy Kamkar: That sounds like Pablos. So this guy is awesome. I mean, he’s down-to-earth, sociable. These are elements that a lot of hackers lack, right? And I really like that. I like the ability to sit down in front of numbers and unattractive code and also be able to communicate with people and actually have a real relationship with people and socialize more. Another reason I loved being away from computers for three years, right? It forced me to socialize. And if I didn’t have that, this conversation would be very different.

So I really like Pablos, just because when I learned about The Shmoo Group, I was 14 years old. And this was the first time at my favorite – at a conference called DEFCON, one of the biggest hacker conferences in the world. It’s in Vegas every year. And they had this robot that would drive around. And it was two big wheels and a screen. And all it did was show you your passwords.

Tim Ferriss: Oh, God.

Samy Kamkar: So it would drive up to you, wirelessly, and it would just be like, “This is your password.” And you’re like, “What?” If you had a phone or you’re on your laptop, it would just sniff passwords in the air and show you.

Tim Ferriss: That’s terrifying.

Samy Kamkar: I thought it was beautiful.

Tim Ferriss: Beautiful and terrifying.

Samy Kamkar: Yes.

Tim Ferriss: Like so many things in life.

Samy Kamkar: So he’s definitely a guy. And also Dan Kaminsky is another really smart, really –

Tim Ferriss: I know that name for some reason. Why do I know that?

Samy Kamkar: He's done some really – he's found some huge vulnerabilities in the Internet. So if you've heard of the Internet, he had something called the Kaminsky bug a few years ago where he found a way that he could essentially control any domain name. If he wanted Google.com to point to his website, he could. And he helped –

Tim Ferriss: That seems reasonably powerful.

Samy Kamkar: – patch it. Yeah. Very powerful. And he made a huge effort to resolve it very quickly and effectively. So I think he's been someone I've watched at DEFCON ever since I was 14 years old.

Tim Ferriss: How many people attend DEFCON each year?

Samy Kamkar: Now it's over 10,000. It's probably like 15,000 per year.

Tim Ferriss: Wow. From the standpoint of a non-techie – I have a severe anxiety related to – so I've heard of DEFCON for quite some time.

Samy Kamkar: Okay.

Tim Ferriss: And we were talking about the magazine that you read for quite some time.

Samy Kamkar: 2600. Yeah.

Tim Ferriss: That's right. 2600, which I picked up years ago, but lacked, much to my embarrassment, sorta the technical chops to appreciate, even though I picked it up. Should someone be intimidated and afraid of going to, say, a DEFCON? Are there risks involved?

Samy Kamkar: That's a great question. If you turn off your phone, you should not be afraid. Everyone's actually really cool. I mean, this is –

Tim Ferriss: Because I would love to attend. I've never been, but my fear is that, as a non-techie, I would just be caught with my pants down, bent over a barrel, every which way from Sunday, because I am so easy to exploit in that respect.

Samy Kamkar: I would say, seriously: turn off your phone, turn off your laptop, and talk to people. A) Everyone – it's almost like all the hackers are among friends. I know I am. When I'm there, these are my

friends, whether I know them or not. These are people who have similar interests to me.

Tim Ferriss: Kindred spirits.

Samy Kamkar: And even you, right? If you find it interesting enough that you'd want to attend. And some really smart people, some really interesting people from all walks of life. But there are definitely people who are – they're called script kitties in the hacker community. I was a script kitty.

Tim Ferriss: I want you to elaborate on this.

Samy Kamkar: All right. So, yeah: I grew up, I was a script kitty. When I learned about a denial-of-service attack –

Tim Ferriss: WinNuke.

Samy Kamkar: Yeah. When I downloaded WinNuke and knew I could crash someone's computer, or that I could open someone's CD Rom – that was one of the fun ones. I could just open any of my friend's CD Roms.

Tim Ferriss: Just to poltergeist your friends?

Samy Kamkar: Yeah. These are the ones that came – they would just come out, right? They'd be like surfing the web, and boom: CD Rom opened. They're like, "What?" A script kitty is someone who doesn't necessarily know what they're doing, but they've downloaded some program or script that is doing something out of their hacker pay grade, right? It's out of their technical chops. And that's okay. That's how you learn. That's how you learn anything, right? You take what you can.

And there's nothing wrong with using the tools available. I don't think there's anything wrong with that. I don't think you should be a malicious – I'm not a malicious hacker. I don't wanna destroy or hurt people. I really want to show people the lack of security that exists today and hopefully help protect them, and teach other people what they can learn.

Tim Ferriss: So you have – I think in the – let's just say the mainstream perception of hackers – the white hats, right? Just like *Spy vs. Spy*, you got the good guy.

Samy Kamkar: Yeah. Sure.

Tim Ferriss: You got the black hats, the bad guys.

Samy Kamkar: Right.

Tim Ferriss: And the malicious folks. And then you have the gray hats, or the people in between. How do those different groups think philosophically? Because – I guess the idea being: if you look at the Stalins of the world, the Hitlers of the world, they absolutely – and I’m not equating that to black hat at all. But I’m just saying: they believe themselves to be doing the right thing, right? So what are the philosophical orientations of those different groups?

Samy Kamkar: You know, I’d say: if you’re a black hat, perhaps ignorance is bliss. I’ve learned that I’m ignorant of a lot of things when I don’t think about them. If I don’t actually take the time to sit down and think, “How does this,” let’s say, “effect someone? How would I feel if I were in this other person’s shoes?” I can remain ignorant about something. And sometimes you want to, right? Sometimes I don’t wanna know that this –

Tim Ferriss: Well, right. If you’re a guy in Las Vegas who’s remotely flying drones in Iraq, blowing up dozens or hundreds of people, you think of it as a first person shooter game, not as a real world exercise.

Samy Kamkar: Right. I gotta be honest: every time I eat a steak, I’m intentionally not thinking about what happens, right? More and more, I do think about this now. But I love steak. So I’m like, “Maybe I should just be a little black hat in my food etiquette.” So I eat –

Tim Ferriss: Black hat carnivore?

Samy Kamkar: Yeah. I mean, oh man. I love it, so I’m being ignorant. And now I’m just being silly. But I’d say, yeah: black hats aren’t really – and I think that’s true of anything. If you don’t think about how it actually affects somebody then you’re doing that. Oh, more wine.

Tim Ferriss: There’s more wine to be had. So I shall pour more wine.

Samy Kamkar: What’s this wine called?

Tim Ferriss: This is a somewhat amusing label. And I may be abusing my housemate’s wine collection.

Samy Kamkar: Sorry, housemate.

Tim Ferriss: Sorry, housemate. So there's a very trippy tattooed chick on what appears to be a motorcycle on the label. And the brand is "If You See Kay," which spells, of course, "F-U-C-K," i.e.: "FUCK." Which is such a delectable, flexible curse word in the English language. For those interested, there is a book called *English as a Second Fucking Language*, all about the use of the word *fuck*, which is really fascinating. But I digress.

And we've killed our second bottle.

Samy Kamkar: Can't wait to read the Spark notes on that.

Tim Ferriss: Well done. Good work, Samy.

Samy Kamkar: Good work, Tim.

Tim Ferriss: So we were talking about black hats, steaks –

Samy Kamkar: Another thing –

Tim Ferriss: Were you ever a black hat?

Samy Kamkar: Oh, man. I mean, I guess people might see black hat differently. I think if you're trying to sort of – a lot of black hats, typically what they're doing is they're hacking for financial gain. I've never hacked for financial gain. Except for all the jobs I've gotten for hacking. But not hacking maliciously. I would say a lot of hackers – and I find a lot of the black hats are actually in Romania and Russia and a lot of countries where maybe they don't hit you so hard for doing that. Maybe there aren't that many laws around that.

Tim Ferriss: Romania seems to be a real hotbed for a lot of that.

Samy Kamkar: Yeah.

Tim Ferriss: They have Western Unions every like half block.

Samy Kamkar: Yeah.

Tim Ferriss: It's astonishing. It's really become a sort of nexus for a lot of that activity.

Samy Kamkar: Yeah. That's why I'm in Romania nine months a year. Just kidding.

Tim Ferriss: It's where your summer home is?

Samy Kamkar: Right. It's where my first home is. No, just kidding. But I would say – so black hats are typically doing it for financial gain. And there's so many ways to do it for financial gain. And I learned that a long time ago.

Tim Ferriss: What are some of the ways to do it for financial gain?

Samy Kamkar: Okay. So, for one: stealing credit cards. Hacking into companies is actually almost trivial. I'll just say that. Anyone can learn how to hack. Anyone can learn these things. And that's one thing that I'm trying to teach people: how computers work, how technology works. And anyone can, let's say, break into a company, if you try; a company that, for example, does retail.

And if you do retail, then you can – let's say you've saved your credit card somewhere. You can then steal that database full of credit card numbers. And you can then sell that. You can either monetize it yourself and you can produce credit cards, using a mag stripe writer, and create your own credit cards and use them. Or you could sell it to someone else who already has that handled.

I mean, there's sort of a little distribution chain that goes down. That's one simple example of someone who could be an entire novice – what you might call a script kitty – and who can steal databases –

Tim Ferriss: Just enough to be dangerous.

Samy Kamkar: – chock full of credit cards, and sell it. And make money. This is a huge thing. This is actually why – this is a lot of what the secret service does. Besides protecting the president, it's also protecting money. And online is the easiest way to steal money.

Also like, as you say, Pablos, right? He probably waved something, is my guess – RFID-based, where he stole your credit card number. Because these –

Tim Ferriss: Yeah. Just to explain, one more time, to folks: this was many years ago, too. This was not recently. And he had a small hand-held device that he waved at the front row while giving a keynote, and was able to capture all their credit card information from their wallets.

Samy Kamkar: Oh, man. Amazing. I love that.

Tim Ferriss: Oh, God.

Samy Kamkar: So, yeah: you're just getting credit card numbers. I mean, the beautiful thing about that – that RFID – that RF? That's radio frequency, right? It's the same thing as stealing cars. You can just walk through Time Square and just steal numbers without ever touching a person. It's insane. So you can then sell those, right? There's a black market that that –

Tim Ferriss: Where does someone go to sell credit cards?

Samy Kamkar: I can give you a list of sights. No. There's a lot of forums, typically private forums. There's also governments, definitely, in those forums as well.

Tim Ferriss: Governments who buy those credit cards?

Samy Kamkar: Who buy those credit cards, who try to track those credit cards. I subcontracted for a company, 13 years ago, that worked with the FBI. And what we were doing was tracking down a huge thief of credit cards. And they had not only penetrated a company that had credit cards – like a retailer. The hacker group had penetrated a gateway. A gateway is who your credit cards go through. Today it would be like a Stripe or a PayPal.

Tim Ferriss: Or an authorized.net.

Samy Kamkar: Authorized.net. Exactly. So it's a credit card processor. It's the people who get all the credit cards from all the companies online. And they had penetrated those servers. And we had found this. The FBI told us. And we investigated and we had a little bit of authorization to hack these Romanian servers.

Tim Ferriss: Surprise, surprise.

Samy Kamkar: So, essentially –

Tim Ferriss: [Speaking foreign language] [00:57:45].

Samy Kamkar: So I essentially –

Tim Ferriss: [Speaking foreign language]. I've spent a little bit of time around the Romanians.

Samy Kamkar: Oh, nice.

Tim Ferriss: They're a fun group.

Samy Kamkar: Talk. And, essentially, our job was to track them and find them. And we did. After I found one of the hackers and found their chatroom and chatted with them and became friends, they'd send me pictures and I saw this guy's new Viper in his garage. Brand new Viper, cash.

Tim Ferriss: Oh, wow. Nice.

Samy Kamkar: Romanian cash.

Tim Ferriss: That's a power move.

Samy Kamkar: Yeah.

Tim Ferriss: That's like *New Jack City*-style, in Romania.

Samy Kamkar: And that's how we found them. I mean, the crazy thing is: so many things are hacked on a daily basis. And we just don't know. And a lot of the time, companies are required to tell their users. Not everyone tells you that you got hacked, right? We hear about hacks all the time now. And it's unfortunate, but so many companies are being hacked and don't know it.

Tim Ferriss: What do you think of using services like a 1Password or a LastPass, or whatnot, to try to improve your security with passwords?

Samy Kamkar: That's a tough question for me. Just because I'm unsure how I feel about them. I, personally, don't subscribe to them. Just for the fact that they seem like a big target, right? If I were –

Tim Ferriss: It's a high value target.

Samy Kamkar: Yeah. If I were malicious –

Tim Ferriss: HVT, as they would say.

Samy Kamkar: – I would be analyzing their code every day, trying to find a flaw, so that, when I want, I could then get – when I do hack computers, when I do drop some malware on a website, I then get all your passwords. Not just one. So the idea is –

Tim Ferriss: The mother-load.

Samy Kamkar: However, in general, I think they're doing a good thing. Because I believe – if you're a person who uses the same password for every website, I believe it's superior to use a program like LastPass or – Abene has another password manager.

Tim Ferriss: Right. Or 1Password, or whatever.

Samy Kamkar: Yeah. So I believe it's better to use those than to use the same password everywhere. What I would suggest to everyone – something I do: I don't make ridiculous passwords that are hard to remember. I make really easy passwords to remember. And they're just really long. Usually lyrics in a song.

Tim Ferriss: Oh. I see. “Welcome to the jungle, baby.”

Samy Kamkar: Exactly.

Tim Ferriss: Etcetera.

Samy Kamkar: Think of your favorite Puff Daddy song. Dr. Dre. Mo Money. Choose some lyrics. It doesn't matter if there's not a crazy exclamation marks and capital letters. You don't need that. If it's really long but easy to remember, that's much better than an exclamation mark in the middle.

Tim Ferriss: For a short password.

Samy Kamkar: And you can remember it, right? For your bank, use stuff related to bling. For a different website, what makes you think of that website?

Tim Ferriss: What other precautions – you freaked me out. I hadn't mentioned my name before, but I will now, with the hijacking of laptop cameras? So I just got a new computer. I need to cover up that camera. But what other precautions would you suggest that people take?

Samy Kamkar: Well, I'd say there's a pretty advanced technology that you can actually use to protect you against someone invading, essentially, the camera. Recently people have found that they've been able to enable the MacBook cameras without the light coming on.

Tim Ferriss: Wow.

Samy Kamkar: And supposedly the FBI has been able to do this for year. But now it's been found by other people, and demonstrated. So there's a pretty advanced technology that came out a long time ago called the Post-It. And you can apply the Post-It just over the camera. And when you wish to Skype or FaceTime or –

Tim Ferriss: You can lift said Post-It –

Samy Kamkar: Exactly.

Tim Ferriss: – or masking tape, which was my go-to.

Samy Kamkar: Correct.

Tim Ferriss: Are there any software programs or applications that you use to improve security or anonymity on your computer?

Samy Kamkar: Man, this is a weird one. And this is something that I will – it makes me feel funny. There's a software called –

Tim Ferriss: Could be the wine.

Samy Kamkar: There's a software called TrueCrypt.

Tim Ferriss: TrueCrypt.

Samy Kamkar: Correct: TrueCrypt. This is a software – it's open-source. It's been developed to help you encrypt your either hard drive or folder or flash drive. And it allows you to say: "Okay, if you have information you wanna protect, you can encrypt it with this software called TrueCrypt." It requires a password. And no one knows who created TrueCrypt. It's always been open-source. It's probably been a team of developers. And that's really cool.

Recently, maybe a few months ago, the website changed. And it said: "TrueCrypt is insecure. Don't use it. Go use something else." And that was it. The authors said that, and it was done. This is one of the craziest things. There are very few products or pieces of software out in the world that are anonymous, that are run by anonymous group, and that are successful. TrueCrypt is a success. And when I say "a success," I mean: people who want protection use TrueCrypt.

So it's kind of scary to hear the thing that you've been – at least if you're in my world, you would be using TrueCrypt if you wanted to protect information. Because it has a wide base of smart users

who already understand cryptography and who want to protect their stuff and aren't just using something random off the shelf that may or may not have flaws. Because it's open-source, it can be analyzed and audited by other people.

And just recently, probably within the past few days, an audit of –

Tim Ferriss: The past few days?

Samy Kamkar: The past few days. An audit of TrueCrypt has been completed. Because, for a long time, people have been saying, "We need to audit TrueCrypt just to make sure it's secure." And an audit has been completed, and there were some minor flaws, some flaws that could be exploited, but nothing huge, nothing wary, nothing like: "Oh, there's a back door in here."

Tim Ferriss: So why do you think that message was put out?

Samy Kamkar: Oh, man. I have no idea. I mean, the question is: did someone – there have been some interesting things that have happened recently, especially with the revelations of Snowden. For one thing, there's these gag orders that we've now learned about: that sometimes the NSA can send a gag order and say, "We want information and you can't tell your users. You can't tell the public that we gave you this gag order." So I think some sites are actually employing something where they say, "We have never been asked by the government to provide any information."

Tim Ferriss: Which is completely –

Samy Kamkar: So if they ever do get –

Tim Ferriss: – incorrect, inaccurate.

Samy Kamkar: Well, no. They put this up before they've ever been asked.

Tim Ferriss: Oh, I see.

Samy Kamkar: So if they're ever asked, they have to take it down. So this hasn't been tested in court. But the idea is –

Tim Ferriss: It's clever, though. It's like a plausible deniability thing.

Samy Kamkar: Exactly. Oh, one of the cool things about TrueCrypt is that –

Tim Ferriss: TrueCrypt: T-R-U-E-C-R-

Samy Kamkar: Y-P-T.

Tim Ferriss: Jesus Christ. Okay. Let's have some more wine.

Samy Kamkar: Yeah. TrueCrypt. One thing that's really interesting about TrueCrypt is that it has a feature about plausible deniability. For example: if you're at a border and someone requests you to give them your password, you have to. In border crossings, you have no – they have full jurisdiction. They can do whatever they want. So if they ask you for your password, you have to give it. Or you could just go to Mexican jail.

Tim Ferriss: Not an attractive option, generally speaking.

Samy Kamkar: Right. So you can just –

Tim Ferriss: Comes back to our: losing your front teeth, losing your thumbs question.

Samy Kamkar: Right. Or teeth. There's an interesting feature with TrueCrypt where you can apply two passwords to an encrypted drive. So let's say you have an encrypted folder; it has a password that unlocks it. And if you go to the border and they say, "Give us your password," you have to give it up. And now those files are for them to use as they please. TrueCrypt has a feature where you can use two passwords. And it decrypts the same drive with two different passwords.

Tim Ferriss: So one is a decoy?

Samy Kamkar: One is, essentially, a decoy. And the beautiful part about the way it works is that the data is all randomized when it's encrypted. There's no way to prove that you're using the secondary password. It's impossible to prove – today it's impossible. We know of no possible way, today, with the existing technology, to show that there is one or two passwords used. Most people only use one. Most people only need one. Because they don't care if the government gets this information. They're protecting corporate secrets, for example. Or they're protecting private pictures or whatever.

Some people do care. And if they do care, they can use this additional feature where it uses, essentially, the same encrypted method. And when you give up the password, there's no way to prove whether there's a secondary password in use or not. So

that's a really cool feature, I think. And I think plausible deniability's really interesting. It's a really interesting thing to play with.

Tim Ferriss: Super interesting. I know guys who – these are CEOs of companies who go to China. And they will always bring a – effectively – blank netbook with them to China. Because they assume whenever they check into a half decent hotel in China that their data's immediately being downloaded from their computers.

Samy Kamkar: Yeah. Absolutely.

Tim Ferriss: And man, having spent some time in China, that would not surprise me in the least.

Samy Kamkar: Oh, absolutely. I mean, just recently – literally in the past few days as well, China's certificate agency – the people who encrypt all the web traffic in China – gave out a fake certificate for Google.com so that they could essentially – well, they claim that it was an accident. Who knows? But essentially if you're using them – if you're in China and you go to a Google.com domain or Gmail, for example, that you believe is encrypted, they can decrypt everything.

Tim Ferriss: Oh, Jesus Christ.

Samy Kamkar: They can read your email, for example.

Tim Ferriss: That is a very literal example of – those of you who speak Chinese – that is [Speaking Chinese] [01:08:39]. [Speaking Chinese] is “taking the back door,” which is an expression used typically to refer to, say, bribing officials or something like that; doing something very unofficial that gets official results. But: “accident.” Come on.

Samy Kamkar: Yeah. I'll say: when it comes to tools, if you're looking for more tools, I keep a private – it's just my personal list of what I'm using today. And if you wanna see it, it's Samy.pl/tools.

Tim Ferriss: This is a rad list. I've looked at this before, guys. So you should check it out.

Samy Kamkar: It's just a Google doc. I usually just send it to my friends. But if people are interested in what I'm using today, this is my updated list of the software I run, pretty much.

Tim Ferriss: Cool. Samy.pl/tools. All right. Cool. I'll link to that as well. Do you read much? Do you read books?

Samy Kamkar: I don't. I was about to say, "I used to." No. I never did. No. I read here and there. Pretty much what I do is: I'll read a few pages. And I love Amazon because they let you read a few pages. And if I feel addicted – and sometimes I do – then I keep reading and I buy it.

Tim Ferriss: What are the last books that have caught your attention that way?

Samy Kamkar: Caught my attention.

Tim Ferriss: What are books that come to mind that have stuck with you?

Samy Kamkar: Okay. I mean, lately I've been into mechanical engineering, so I've been reading mechanical engineering books. But I would say things that have affected me, have changed me, that I think are really cool – I would say one book is called *Influence*, by Robert Cialdini.

Tim Ferriss: Definitely.

Samy Kamkar: I learned that about – I believe it was Stan who told me about that, when I was 16 and I read that. I mean, this came out before I was born. It was in the early '80s.

Tim Ferriss: Jesus Christ. Wait, when were you born again?

Samy Kamkar: '85.

Tim Ferriss: Good God. Youngin. Little sea monkey pup. Continue. Sorry.

Samy Kamkar: Sure. So *Influence* –

Tim Ferriss: I had my age come crashing down upon me. Please continue.

Samy Kamkar: So *Influence*: it's a book about influence and how humans can be influenced and persuaded to do things. I mean, I don't recall whether it's a book for salespeople or for manipulating people, or how to protect yourself. It's a little bit of all of it, actually. And I love it because it was a very systematic and analytical approach to the most common ways that human beings have been known to be influenced and persuaded to do something. You could use it for sales. You could use it to attract people. You could use it for – these are life skills. I believe these are life skills.

Tim Ferriss: Definitely. Scarcity. Time restrictions.

Samy Kamkar: Sure. Social proof.

Tim Ferriss: “I have to run to save some penguins, but” –

Samy Kamkar: Right.

Tim Ferriss: These are common principles.

Samy Kamkar: And that’s likability too, right? To save some penguins: likability. So those shaped me. To understand how I could – and it’s not influence people in a negative way. I mean, it can be used that way. But it’s: how can I socialize with the humans around me? And how can I befriend people? And how can I use reciprocity to have people in my life who I like and respect and appreciate? And I want them to respect me back. I want them to appreciate me. So how can I use these tactics and methods appropriately to do that?

Tim Ferriss: When you need to be in the zone, for coding or anything else, what music do you listen to these days?

Samy Kamkar: Cool. That’s a great question. I love music. I go to – I listen to a blog: audiomolly.com

Tim Ferriss: Audiomolly.

Samy Kamkar: [Audiomolly.com](http://audiomolly.com).

Tim Ferriss: That’s an amazing name.

Samy Kamkar: Yeah. I’m not sure how they got that name.

Tim Ferriss: We could take that a lotta directions. But that’s an amazing name.

Samy Kamkar: It’s EDM, so it’s a lot of electronic dance music. And they have sorta like the latest stuff, but it’s not poppy. Man, I don’t care if it’s poppy or not. If it’s really good, then I really like it. So I’d say: lately I’ve listened to a lot of electronic music. Man, you had someone from The Glitch Mob on [inaudible].

Tim Ferriss: Yeah. Boreta. Justin. Great guy.

Samy Kamkar: Man, I love The Glitch Mob.

Tim Ferriss: Yeah. They're great.

Samy Kamkar: The Glitch Mob – they came out with an album maybe a year ago or two years ago. They're one of my favorites. So I would say that kinda music. Like The Glitch Mob. Infected Mushroom.

Tim Ferriss: Infected Mushroom. Another – what is this –

Samy Kamkar: They're side trance.

Tim Ferriss: Audiomolly, Infected Mushroom.

Samy Kamkar: Those guys are amazing. They play every year at –

Tim Ferriss: I've never heard them.

Samy Kamkar: They play every year at Avalon, and they're always using kinda the latest technology. Like they have these massive – most DJs, they just – some people say they hit play, some people say they scratch, whatever. These guys have these massive, 42 inch Plexiglas screens in front of them that you, as the audience, can see. You can see what they're doing. They're Plexiglas with projection of what they're doing on top.

Tim Ferriss: That's cool. Very *Minority Report*.

Samy Kamkar: Oh, so *Minority Report*. It's this device called the Emulator that they're using and they're tapping. So everyone can see what they're doing. They're on the stage live, DJing. And it's so futuristic. It is exactly – *Minority Report* in EDM. So electronic music is what I listen to a lot.

Tim Ferriss: What was it? Infected Mushroom?

Samy Kamkar: Infected Mushroom. They've been around for many years: an Israeli duo.

Tim Ferriss: Those Israelis: so proactive.

Samy Kamkar: And they're always keeping up-to-date with sound. I think they appreciate quality in their work. I really like that.

Tim Ferriss: Very cool. I'll ask you a question I haven't asked in a while: if you had to conjure a face and a name to correlate to “punchable” –

Samy Kamkar: Punchable?

Tim Ferriss: Punchable. Yeah. What comes to mind?

Samy Kamkar: Oh. I don't know. I don't usually wanna punch people.

Tim Ferriss: Could be a conceptual punchable foe of some type.

Samy Kamkar: Tim, why?

Tim Ferriss: "Tim"? That's a fair answer.

Samy Kamkar: No, not you.

Tim Ferriss: People wanna punch me too.

Samy Kamkar: Why are you asking? I don't wanna punch you. I don't really wanna punch people.

Tim Ferriss: Shake. You wanna shake them really hard. Chris Rock-style. You don't wanna punch them. You just wanna shake them.

Samy Kamkar: Okay. I got one. I don't know who they are. I don't know their names. And I'm not upset at them, because I know it's not their fault. But these people making these map softwares for our phones. Like –

Tim Ferriss: Just having driven with you recently, this is perfect.

Samy Kamkar: I mean, when iPhone came out, Google Maps was there. And it wasn't Google. It was Apple/Google Maps, which was one of the most beautiful harmonies I've ever seen. It was the most effective map software for a mobile phone ever. And then Apple said, "No. We don't want your Google stuff. We're gonna come out with our own maps," and removed this original map software. And instead of Apple coming out with beautiful software like they normally do, they're like, "Here's some shitty software for you. Clap your hands." And that was awful.

And then Google Maps came out. And they came out with their amazing Google back end, and then they had to design their own app. So they had their UI people and their UX people – I'm not sure what UX people. But they came out – their user experience – and they're like, "Here's like a seal trying to tell you how to get around town. It's just like clapping –

Tim Ferriss: Seal, like arr-arr?

Samy Kamkar: It's just, "Arr-arr." With amazing back end. That's what I love about Google: it's a bunch of engineers. But that's it. I need more. There's more than engineers there, I know it. So: show me more than the engineer – I understand the engineering back end. But there's this beautiful, creative front end that people who actually sit down and use their software. And it was when I was shaking my phone in anger, recently, and I was like yelling at my Google Maps, and I was like, "Why won't you just tell me where to go? Why do I have to – seven times to get to a new directions." And it said, "Do you have a suggestion for us?"

And I was like, "What are you talking about? What do you mean, 'Do I have a suggestion?' How do you know what I'm saying? Are you listening to me?" And it's possible. And a few days later, it happened. Like a week ago, I shook my phone in anger, yelling at it – Google Maps. And it said, "Do you have a suggestion?" And I said, "How do you know this? How do you know I'm upset? Are you reading" – is it like Scientology where they have that E-Meter and they can read your spiritual harmonics or something? And I was like, "They must be listening to me. That's not cool. That's unacceptable." And then I shook the phone and it did it again. I was like, "Oh wow. Someone at Google was" –

Tim Ferriss: It's accelerometer-based.

Samy Kamkar: Exactly. Someone at Google was pissed off enough that they're like, "Oh, yeah. I shake my phone when I use Google Maps all the time. We should implement this."

I do love Google Maps. And I love Google. They do some really cool stuff. But I shake my phone a lot.

Tim Ferriss: You wanna punch Google Maps in the face sometimes.

Samy Kamkar: I wanna punch Google Maps in the face.

Tim Ferriss: What advice – how old are you right now?

Samy Kamkar: I'm 29.

Tim Ferriss: Oof, man. Getting old.

Samy Kamkar: But I think I can reverse it. We'll see.

Tim Ferriss: You've reversed it?

Samy Kamkar: No. I'm working on that. I'm just gonna keep up with your blog and –

Tim Ferriss: All of my drug regimens. What advice would you give your 20-year-old self?

Samy Kamkar: Oh, 20-year-old. "Stop committing felonies. You can't use a computer, idiot. You're sitting there" –

Tim Ferriss: What about 15?

Samy Kamkar: 15? Oh, okay. "Stop wasting time in school." It depends who I'm talking to. If I'm talking to myself, what would I say? Man, there's so much I can tell myself: "Invest in Apple."

Tim Ferriss: Exactly.

Samy Kamkar: I would say...I don't know. "Go with the flow." I've always tried to go with the flow. And I learned, early – reading about people meditating or something – that everything's kinda cool and everything's okay if you allow that to – you're pretty much in control of your own destiny. I wish I could say that for myself as much as I like. "But you're in control of your emotions. So try to not worry about things so much." I really try not to worry about things. Try to be good and – at this point in my life? Yeah. I guess I would say one thing. I would say the same thing I said earlier: "Try to do whatever the hell you want to feel good without intentionally hurting someone else." That's what I'd say.

Tim Ferriss: That's good advice.

Samy Kamkar: That's what I'd tell myself.

Tim Ferriss: So where can people find you on the interwebs? Whether it's your site, YouTube, all of the above?

Samy Kamkar: Yeah. So I'm doing one thing now: I'm doing new YouTube videos and also write very detailed write-ups, and teaching people how to hack, how to code, how to reverse-engineer, and also teaching regular consumers, everyday consumers – who have things like phones and computers and cars – how to protect themselves. And then demonstrating the really cool exploits and vulnerabilities like how to steal cars. So I'd say the best ways to follow me: you can follow me on Twitter. It's @samykamkar – S-

A-M-Y K-A-M-K-A-R. Or following me on YouTube, which is my really old YouTube username: s4myk.

Tim Ferriss: Oh, Jesus. That's terrible. Say it again.

Samy Kamkar: No. 4 is like 'A' in hacker speak. So like: samyk.

Tim Ferriss: Give it to me again.

Samy Kamkar: It's like samyk, but samyk was taken, so I had to take s4myk.

Tim Ferriss: Oh, that's not so bad.

Samy Kamkar: It's kinda bad.

Tim Ferriss: It's bad, but it could be worse.

Samy Kamkar: It was just like: I never thought I'd use this. This was my –

Tim Ferriss: S4myk?

Samy Kamkar: I used to play Halo on Xbox and also was s4my.

Tim Ferriss: So quick side-note on Halo: I had a chance at one point – I had only played Halo once before, and then I had a chance to play – I think he was the world champion at the time – a guy named Fatality. And just got –

Samy Kamkar: Sounds familiar.

Tim Ferriss: – fucking obliterated in –

Samy Kamkar: Isn't he like a pro?

Tim Ferriss: Oh yeah. He's totally pro.

Samy Kamkar: I think I saw his billboard on Highland Avenue in Hollywood.

Tim Ferriss: Yeah. He's well-known. This was a couple years ago. And it was like my second game ever. And just got so manhandled. It was utterly embarrassing beyond embarrassing.

Samy Kamkar: Awesome.

Tim Ferriss: All right. So we got you on YouTube. We have you on Twitter. I will link to all those in the show notes as well. Anywhere else?

Samy Kamkar: Just my website. Samy.pl.

Tim Ferriss: And this is where people can find the tools as well.

Samy Kamkar: They can find all my tools. Almost everything I do is open-source. It's free. I have a mailing list where I just send sneak peeks of new vulnerability research and tips on how to protect yourself.

Tim Ferriss: Awesome. This is super fun. We need to do more of these. And, for those interested, also did a TV show where Samy made a guest appearance. And that should be available at [iTunes.com/timferriss](https://itunes.com/timferriss) – T-I-M-F-E-R-R-I-S-S. Two r's, two s's. Or potentially on YouTube: YouTube.com/timferriss. Also with two r's and two s's.

Samy, thanks so much, man.

Samy Kamkar: Thanks, Tim.

Tim Ferriss: More wine in the future.

Samy Kamkar: All right. Looking forward to it.

Tim Ferriss: All right, man.