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Defense Expert To Speak About Artificial Intelligence Challenges At Antioch Symposium

By JERRY KENNEY · JUL 12, 2019

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VIA ANTIOCH COLLEGE

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Antioch College is hosting an Artificial Intelligence Symposium on Monday, July 15, 2019. It will take place from 4:00 to 6:00 PM at the Eichelberger Forum Main Stage at the Dayton Metro Library, located at 215 E. Third St., Dayton.

The featured speaker at the symposium will be US defense expert and Antioch College alumnus Jay Tuck. The author and investigative journalist will be joined by a panel of "Dayton-area AI experts," including Dr. Amy L. Magnus of the Air Force Institute of Technology.

Antioch College says the Artificial Intelligence Symposium "will explore AI as humanity's greatest challenge," and to find out more about those challenges, WYSO spoke Tuck in our Yellow Springs studios.

Jerry Kenney (JK): You're listening to 91.3 WYSO I'm Jerry Kenney. Thanks for joining us. And in studio with me today is investigative reporter, best selling author, and defense expert Jay Tuck. Jay, nice to meet you and welcome to the studios.

Jay Tuck (JT): Thank you Jerry.

JK: So you will be appearing at an Antioch College symposium on Monday July 15th to talk about artificial intelligence and some of the challenges that we are presented with through A.I. today. And so can you tell us a little bit about what you'll be speaking to the audience about?

JT: Well let me start with our location we're here in the middle of America and people on the East Coast or on the West Coast they kind of think of flyover state that's just farmers out there there's no importance but people who are in the know know that no one Dayton is a very very important high tech area. I went through the airport and I counted to like 80 percent of all the signs were all high tech companies that work here. And one of the reasons they work here is because we have Wright Patterson Air Force Base and they are just not just Air Force they are doing the hottest A.I. research in the world at the Air Force Research Laboratory. They are developing a mother among other things drones that are smaller than mosquitoes. It's very high end stuff.

JK: You mentioned the Dayton area and technology but it's something that the Miami Valley has been known for for a long time innovation and invention.

JT: That's true. Yes it is. A lot of companies around here are called Wright and that has to do with the invention of the the airplane. That's all been going on here for for a very long time but they're they're very advanced here. They're very hip as far as technology goes. And that's not just the industry, it's also agriculture. Most people have no idea that A.I. is very important in agriculture. And I can mention one example - there's a machine out there it's called the lettuce-bot - you put it behind your tractor and you run through the lettuce fields. And this machine with a I can analyze one million lettuce plants in one hour, and it not only analyzes them it distributes then fertilizers and insecticides, so it comes out gets along with a thimbleful of poisons on places where they're now dumping truckloads and truckloads and truckloads of poisons on our on our food.

JK: Technology is changing at a very rapid pace and I think a lot of people find it disconcerting and worry about what's coming our way.

JT: It's true it's going so fast the scientific word is exponentially, but basically it's growing at an explosive rate. Things are going so fast and let me give you one one figure - 200 million pages of information can be digested by an A.I. system in three seconds. Now wrap your human brain around two hundred million pages of information and I mean we have twelve hundred grams. We have 20 watts of power in our heads and there is no way a human being can even understand how much that means - 200 million pages of information and it's growing and growing and growing and growing.

Life is changing in ways and at speeds that he cannot comprehend. It really doesn't matter who you are or what your job is, what your profession is, you will be profoundly influenced by this technology. If you're if you're a fireman, if you're a farmer, if you're a pilot, if you're a teacher, everything is changing so fast that you have to, you have to study what's going on. You have to keep up with it. If you don't you're lost if you're a company or if you're an individual.

JK: And well I would think also of government systems. We're you know, we're a system of laws and regulations and do you feel that legislatively things are keeping pace with artificial intelligence and new technologies?

JT: Wouldn't that be nice. I've met many too many lawmakers in the U.S. Congress and in the Parliament of Brussels and in Germany and elsewhere to have much confidence that they will understand what's going on and their machines are very slow. If you have a new medicine that's going to cure cancer you need five or six years before it goes through the processes of of being released to the public to help us. If you have an app you just throw it on the market. There's nobody who approves it, no one who changes it. It doesn't matter how radical this app will change our lives, it goes like that.

There used to be a delay for technology. Go back to Gutenberg and the printing press. It took hundreds of years before people started reading books all over the place or the Industrial Revolution. Between the discovery of the steam engine bay by James Watt and and the Industrial Revolution decades and decades a time when if you have a new invention now it goes like that. It's accepted immediately, if it's good it's accepted immediately. There is no technology delay and that means we don't have time to think about it.

JK: There is a certain amount of responsibility that is abdicated with turning over jobs to A.I. systems. Your thoughts?

JT: Yes we. Relinquish our responsibility in society every day a new slice is relinquished to the machines. Why. Because the machines are so damn good at what they do. You look at the stockbrokers. A couple of years back I wanted to be a stockbroker. I want to earn millions maybe billions. I thought that was a very cool way to do it. Later on I was a TV producer and I wanted our reporters down on the floor of the stock exchange. You couldn't get there so loud and so many people running around and dealing with so much. Today it's deserted. There's hardly anyone there.

Richard Quest on CNN, he does his show and there's maybe one guy in the background somewhere because it's being done by machines because an artificial intelligence machine, I mean a human being, he's got this five or six sources and they're sort of telling him if that happens you know that's going to change the stock price. Now you have, in it's in the 'Googledrum dimension'. These machines are watching the whole world. They're watching everything. If there's a new election for the for the union in the Copper Mines of South America that machine will know immediately whether or not the copper prices are going to go up or going to go down. If there's a little breeze in there somewhere in Hong Kong. They will be able to tell 'this is going to be a typhoon and it's going to blow the you know the house down at Sony and it's going to ruin the stock prices there. It's looking at, not 10 or 20 or 100, it's looking at millions of events like that and making decisions, and wisely making decisions.

JK: Do you think that challenge that we face today with a AI is something that's consistent with say the challenges that we've faced since the beginning of the industrial revolution with machines taking over jobs that that people would have done? Do you see it as the same level of challenge or is it a whole new ballgame?

JT: It's a whole new ballgame because the disruption is much more much more grave. And as I say everything we talk about here today, these are just the first baby steps of this technology. It's just beginning. And when it gets in full swing I don't know how human beings will able to be to control it or to figure out what it's going to do because artificial intelligence is intelligent software. It writes itself it's autonomous. It's not a guy sitting in the keyboard who's writing code. It's the machine. They call it training. It's taking huge quantities of data and it's figuring out what's going to happen and it's getting better and better.

In the beginning there were bad. Like the stock market computers made a lot of mistakes but they learned and they learned, and they learned every month, every day, every hour, every second. And they're doing that at this speed every day while we're talking. And it's, it's amazing. It's very helpful. It's wonderful and it's terrifying.

JK: Fans of science fiction listening to you now will talk about Skynet in the Terminator series. Is reality catching up with science fiction?

JT: I've got a firewall in my brain and the one side of it's all this nice stuff in Hollywood and the other is facts. I'm a journalist. I'm an investigative journalist and 365 footnotes in my book. I research this stuff and I know that computers are code. There's no feeling in there, there's no blood, there's no sex, there's no no death, there's no fear of death. All the things that drive human emotions are not in the software, it's just trying to figure out how to do its job. But if its job is keeping the environment clean, i's not going to need much time to figure out who's the problem here, who's driving these SUVs around and messing up all the clean water. It's humans. So the machine's trying to clean it up and then human beings are dirtying it up and it's gonna be a conflict and it's not going to be funny.

JK: Is anyone providing oversight on on this, and what form would that take?

JT: Well when I wrote my book my publisher said you got to put in some kind of good news at the end. You know, you've got to figure out what are we going to do. And the best thing I could come up with was control within the industry that people in the industry, like the atomic engineers who developed the atomic bomb, they didn't know what the heck they were doing until they started exploding them in Nagasaki and Hiroshima and millions of people died. And it's the same with A.I. The people who are sounding the alarm buttons now they're people in the industry and that's where I see my hope that they will, as the Atomic Scientists did in there in their business, that they will help us find solutions that are good.

JK: I want to ask you how you got into what sparked your interest in this subject but I also want to talk about your early days and you actually got a start here at WYSO and Antioch.

JT: Absolutely. This was the very, very beginning. I love doing the children's shows because we could do a lot of different animal voices and that proved to be very helpful. Later on in my career.

JT: As I say, I'm a journalist and I started into weaponry systems defense systems. I was a war correspondent twice and I was in harm's way with the soldiers and lot of people got hurt when we were there. And so a lot of it depended on technology, so, and my first book was I was dealing with the Russian spies who smuggled the NATO technology to the Soviet Union. So I've been working basically around this subject for 15 years now and I was originally going to write a book about Big Data but I'm a TV guy and the writers were faster than me and so I had to re refit it and then decide to do a A.I. instead - artificial intelligence which was a very wise decision because I'm now getting booked all over the world talking to audiences.

JK: You mentioned that your publisher wanted some good news in the mix as well. Let's talk about some benefits and where society is being benefited by today.

JT: Well obviously medicine is one of them. Radiology is basically a profession that you don't need anymore because the MRTs in the CTs that you're doing. They can be better analyzed more accurately analzed by by computers. The same with the with skin tumors. Your doctor can take pictures of skin tours and he can tell whether there's cancer there or not very, very quickly.

And in research, the bad news is, ladies and gentlemen, the big killer diseases are basically unknown to us. We don't know much about Alzheimer or cancer or all of these horrible diseases. What we know is from very, very small little sample groups, 300 people Cleveland Clinic, 3000 people Medical School for Harvard. But those are very very tiny little groups and they're only analyzing a very, very few comparative sources or causes of the cancer. Now with artificial intelligence you can you can study the entire population of the world that has lung cancer. You can study them all and make comparisons and

we will be discovering things about cancer and about Alzheimer and other diseases that will change our lives and increase our lives and the quality, the quality conditions that we have.

JK: I would imagine that you've also seen some benefits with regard to the military which you obviously have experience with as a journalist?

JT: Well, the weapons are getting better and better and there's this terrible cerebral word 'collateral damage' which means civilians dying as a result of attacks. And what with the Predator and Reaper drones they can hit like one truck and not have to wipe out a whole village like you did in World War II. You just go and even have some missiles that you can pick out the driver of that truck and only he gets hurt. And now they're developing very, very dramatic weapon system trade here at Wright Patterson Air Force Base around the corner. They have an extraordinary artificial intelligence department there and they are developing drones that are the size of the mosquitoes and they can go in and knock out a sniper, save lives.

I mean even the fighter jets could look way beyond that line of sight, but these drones are the pilot is sitting in New Mexico. He's sitting in a container in New Mexico and he's killing Taliban in Afghanistan or in Yemen, all around the world. And the 'kill decision,' which is one thing that frightens most people, now is made by humans. American law requires that a human being is in the decision loop when people are killed. Not that the human being is much better at making that decision, but it's a goal of the Pentagon that these machines will make the kill decision themselves. They have written that explicitly and many documents that I published. That's one of the things they want to do and they already have software capable of making the kill decision in many of their drones. They just are not turned on because that's against the law right now.

JK: Why do you think that's of interest to remove that particular responsibility off of the human system?

JT: Well we just like to think we're in control of our lives. You see we human beings we like to think we're the top dog, we're the end of the evolutionary chain and there's nothing better and that's not true. Computers are better at doing so many different things than than we are and they're getting better and better and better, and we develop kind of slowly and we like to feel like we're in control. We want to be in control but we are relinquishing the responsibility for, every day, for many of our biggest decisions.

JK: So as you look at this situation what might be next for you as far as an area of research?

JT: I understand myself as making the wakeup call. I go around and talk to people all over the world and say you know these are the dangers. If I had all the answers I'd be talking about them but I don't. It's a very complex problem and I'm learning more and more every day because the problem is growing every day. There's much to learn, much to do. It's dangerous.

JK: I've been speaking with investigative reporter, also bestselling author and defense expert Jay Tuck. Jay will be speaking at an Antioch College symposium on Monday July 15th. We'll have details for that symposium up on our Web site as well. Jay thanks so much for your time and the information on this fascinating subject.

JT: Thank you, it's been it's been a pleasure being here Jerry. Thank you.