

Work Shift Podcast Episode 14

CHILD 1: When I grow up, I want to be contractor because I like building stuff.

CHILD 2: When I grow up, I want to be a stunt double.

CHILD 3: I want to be a YouTuber.

[music]

SHAWNE McKEOWN: Great. How would you feel about working alongside a robot?

RAYMOND HARRIPAUL: Okay. Will this thing be my little buddy, or will it work alongside me, watching my every move as it develops self-awareness and then plots to replace me?

SHAWNE McKEOWN: I don't think you have to worry about that. In fact, I have a robot here to help us with the opening.

RAYMOND HARRIPAUL: Oh, yeah?

[Robot Voice:] Hi, Ray, how's it going?

RAYMOND HARRIPAUL: Seems friendly.

[Robot Voice:] Hi, Shawne. How are you?

SHAWNE McKEOWN: Good. Hey, you want to read the next bit for us?

[Robot Voice:] Sure. Today we're exploring how service robots can boost efficiency and augment, not replace, human capacity in a range of industries, including healthcare, hospitality, education, and podcasting.

RAYMOND HARRIPAUL: Wait, what?

[Robot Voice:] Welcome to Work Shift.

RAYMOND HARRIPAUL: Hey, that's my line.

[music]

RAMI WEHBE: As you know, with any automation or any digitization, there are always concern about labour and the challenge, or are we replacing people? What we see in the service robot, it's not replacing people, but it's kind of a transformation of the roles and job.

[music]

RAYMOND HARRIPAUL: Digital disruption.

SHAWNE McKEOWN: The gig economy.

RAYMOND HARRIPAUL: Artificial intelligence.

[Robot Voices:] Robots.

RAYMOND HARRIPAUL: And now, COVID-19. What does it all mean for you?

SHAWNE McKEOWN: I'm Shawne McKeown.

RAYMOND HARRIPAUL: I'm Ray Harripaul.

SHAWNE McKEOWN: We're exploring the future of work and changes you can expect to see at your job.

RAYMOND HARRIPAUL: We'll tell you how this massive digital shift could change your career and what you can do to adapt, evolve, and thrive.

SHAWNE McKEOWN: In this episode, we find out why businesses big and small are turning to service robots to make them more competitive and efficient. We're talking to Rami Wehbe, the cofounder and chief technology officer at Global DWS, a systems integrator and solutions provider focussed on cloud computing, AI, the internet of things, and mixed reality. Global DWS has partnered with George Brown College to deliver service robotics education.

RAYMOND HARRIPAUL: We'll also hear from Tanya Spasic, the owner of a vegan restaurant in Toronto's East End, who's using a service robot to help her with deliveries.

SHAWNE McKEOWN: Movies and popular culture have shaped many of our perceptions of robots, but how does this technology affect us in the working world? Rami Wehbe of Global DWS is an expert in emerging tech and has 20 years' experience helping organizations with tech transformations. He breaks down exactly what service robots are and what they can do.

RAMI WEHBE: You can consider a service robot as a digital colleague to human where it can work hand to hand with the human, focussed on the certain areas where there are repetitive tasks and that human, they are not advanced in that area. That service robot will fit, mainly about flexibility, speed, how to scale that enterprise, and how to be able to empower people with the taking faster decision. Mainly you see service robot as a new, advanced computing system in anything related to a routine task or repetitive task where, like, a human will focus more in advanced intellectual activity.

SHAWNE McKEOWN: Service robots can interact with people and they're great at taking on repetitive tasks. They do this through advanced computing systems with artificial intelligence, autonomous navigation, custom vision and voice interaction. Global DWS provides a range of service robots, like event robots, reception robots, scanning robots, safety and security robots. and robots that can assist teachers in the classroom. Rami explains how they work.

RAMI WEHBE: When we have any service robot, you have to define what is the value that service robot will do? Because, at the end, you don't need to add just complexity to any environment by in boarding any new computing system. So today when you look to any organizations, different organizations, they see a huge value from service robot to support in different activity. I can give you [audio skip] robot, like, where, like, robot can answer certain questions that people are asking about certain services in that organization. So, as

you know, many time, many scenarios where people have to wait to get direct access to a human, and in different locations in different zones. So consider if you are in a big event or in the registration period or where you need to do a certain, you need this answer to be able to take decision. Either you have to wait on line or you have to do so many things to be able to get the access to that information. Where the service robot can be set in the front, answering people directly with that voice-interaction capability. And that robot will continue learning and understanding what kind of questions. So this is one area of that literacy. There is also another area where we had opportunity to work with different school board. We ask them where we have some friction in the education. They mentioned there are certain, as you know, in our region, there is a challenge on the number of teachers and students access those teachers, especially with the repetitive tasks. We had opportunity work on one of the robot to do, like, reading assessment for kids. So what I mentioned here when we talk about something, we call it ERAR, education reading assistant robot. It's a robot that empower teachers and students in their reading skills, like where the robot will help students to read and assess their reading skills and competences. And that the robot will be able to review all their reading mistakes and using the same methodology that teachers follow in scoring their reading skills and give the teacher the score directly, so the teacher will focus and educating students in a certain area. So they don't need to spend that much time with each student to read. However, the teacher will focus more in providing the quality of education to those students. So that's where the robot can augment the teachers' competency and capacity and be able to support the students in their reading development.

RAYMOND HARRIPAUL: In fact, George Brown has a robot called Georgie from Global DWS and I believe Georgie is a full-service robot, correct?

RAMI WEHBE: Yes, you are right. We had the great experience with George Brown, which we're advance in this domain to adopt this kind of service robot. When we started the project with George Brown, George Brown came to say, asking, "How can I empower my students? How can I support my students in their life cycle when they start with our educational organization?" So we found that Georgie can help in engaging students and in promoting certain ideas to help students in different stages in their education. So I think it's a good starting point, and George Brown put a strategy, like we'll focus on first step, how we can empower, how we can inform students, how we can interact. And when students need more advanced services, there will be human to support those students. But I think it was very successful project and Georgie is doing great job.

RAYMOND HARRIPAUL: Before COVID-19, Georgie greeted guests and provides information at college events and visited across the college. Georgie lives at our teaching and learning exchange, or TLX, and we're sure our robot is eager to get back to work.

SHAWNE McKEOWN: How would the introduction of service robots affect your job? Do you have anything to worry about? Rami explains.

RAMI WEHBE: As you know, with any automation or any digitalization, there are always concern about labour and the challenge, or are we replacing people? But as you know, and I can give you more supportive information, what we see in the service robot, it's not replacing people but it's kind of a transformation of the roles and job. Instead of having

people to do those repetitive and low-end activity, the plan of any robotics change is to move people to do more advanced job and focus on adding value activity, and move the service role, but to do that kind of repetitive task. At the same time, based on that statistics that we have it, like, release this month, what they found that by adopting more and more advanced robotics, it will increase the economy and it will empower organization to generate more revenue, not to replace people. So it's not about cost optimization. It's more about being more competitive, more advanced, and more efficient in doing the business. So I don't think it's about replacing people. It's more about how to augment the human capacity to do more advanced job, to make those companies more competitive and more agile. Also in our strategy, when we deploy any service robot project, we put something, we call it organizational change management, because we focus on the human. Like, when we adopt any automation project, we will look to the human about people and we tell those people, like, how to do the shift, either to train the robot or to supervise the robot and to continue to be part of the development of those advanced technology, not to replace people and human factor in that organization. At the same time, there is risk that there are certain activities, which is completely predictable, tasks that would be replaced, but that doesn't mean that a human will be replaced. But that task, as you know, in many digitalization and automation there was a replacement for a certain role, but not do that to human. I think part of our responsibility at the community, at the educational organization, how to help people to be advanced and more competitive in supporting those change in those ways and with respect to digitization and automation. It should be, it's enterprise organizational change management. So it's not a one team responsibility to HR. It's leadership, it's the culture-wise. So I think when we have a complete organizational change management practices that will consider all the factors, the front policy, from process, from the human, like, at that time, I think this will be a successful adoption for any kind of automation, especially the service robot.

SHAWNE McKEOWN: A Statistics Canada report released in November 2020 shows that between 1996 and 2017, companies that invested in robots employed more, not fewer, workers.

RAYMOND HARRIPAUL: Firms had a 15% higher employment relative to their industry's average performance after adopting robots.

SHAWNE McKEOWN: Rami says service robots can make companies more efficient and competitive. This goes for small business, as well. Tanya Spasic is the chef and owner of Animal Liberation Kitchen, a vegan restaurant in the east end of Toronto. In October 2020, she started using a small pink robot named Geoffrey to deliver orders to the surrounding neighbourhood. Geoffrey is made and operated by Toronto-based company Tiny Mile Robots.

TANYA SPASIC: It's still beginning, so we don't really have more than one to two orders a week, but I know that's going to change, because, you know, people will realize it's really supporting business, supporting small company that's close in Toronto. And it's just, it's amazing right now during the COVID, because you can literally do curbside pickup and you don't have to deal with a person.

SHAWNE McKEOWN: Yeah.

TANYA SPASIC: You know, like, as a customer, you just go in front of your house, apartment and just, you don't have to touch them, but you just wave and the lid opens and you grab your bags, so it's no, you know, like, contact with a delivery driver or person delivering. So I think that's really plus. And, of course, we are, like, having it, such amazing opportunity to you know, like, extend your reach to the neighbourhoods.

SHAWNE McKEOWN: Yeah.

TANYA SPASIC: And, I mean, just technology is amazing you know, like, of course, they would like to say hi to robot every day [inaudible]. It's just a, you know, like, fun thing.

SHAWNE McKEOWN: Find more information about Tanya and the delivery robot in our show notes at georgebrown.ca/bout/work-shift-podcast. Does the industry you work in have growth potential when it comes to service robots? Rami outlines the sectors where this technology is taking off.

RAMI WEHBE: Well, I see in which industry, like, there is also statistics that shows how the increase on the number of service robot between 2017, which we started around less than \$10 billion in sales in US, now we see in 2021, the prediction between 20 to 21, it's around \$20 billion dollars in sales of the service now. The main area that we have very good and successfully story about logistics, in the medical, in the agriculture, in defence where are the areas where either there is a lot of repetitive tasks where we have risk on the human, where are not enough labourers. I can give you example, like, last year we were in Ottawa in the tourism congress where the hospitality raise the flag that they don't have enough resources to do work on hospitality. So that's where we see in areas on the hospitality, the service robot can help and fit in in this industry to help people to do the job. So we see a big success in logistics, on the agriculture, in healthcare, in defence. And if you ask me, as Global DWS, we have very successful story in the senior home where we have the same challenge about labour and we found in the senior home there are many areas where service robot can support the administration. They support the team. At the same time, engage the seniors and keep them connected to their families and do a lot of advanced job.

SHAWNE McKEOWN: There's great potential for service robots in the healthcare industry. Global DWS created a made-in-Canada robotic solution to the COVID-19 pandemic.

RAMI WEHBE: So, we were able to create something. We call it a disinfection service robot. And the idea came to build this robot completely in our organization because we, first stage, we try to have those robots from other regions and we just put our software. But during COVID-19, we recognize there is another challenge. There was the supply chain management. Many countries, they said, "No. I will focus on my local market. This is very powerful platform and I need to support my healthcare, my community." So we found that we need to do something, so we start building our own disinfection service robot and we get support from the government to manufacture the robot in the local market. And we were very successful to have a complete, something we call it, robotic management system. We have also the disinfection service robot with two-factors disinfection using UVC light, which is very effective, and the disinfecting sprayer. And we have a complete ecosystem to

manage this disinfection service robot. So we were able to build the robot completely here and support our customers in their program to bring people back to offices or to schools. About senior home, like, we were focussed before COVID-19 about how to keep seniors engaged, how to entertain seniors using service robot, how to connect seniors with their family, which is very important. However, during COVID, we recognize that we have bigger challenge, that we are not able to communicate as we need with our senior, the risk on the senior home were very high. We found the service robot as a disinfection service robot has two function. One, to be part of the disinfection process. Second, when the robot is not busy, to be at the door greeting people, reminding people of the health practices, of this physical distancing, of the sanitization process. So the robot was busy during the working hours and after working hours to be part of the health and wellbeing of that environment.

RAYMOND HARRIPAUL: You've heard us talk about service robots and you're interested. You want to learn more. You want to get ahead of the curve. How do you do that?

RAMI WEHBE: If you look to robotics, there will be a spectrum of different jobs and roles to enable service robot in different organizations. Yes, the main robotics design and development, maybe it's a branch of engineering, to be able to, like, come up with a new capability to support robotics or adding additional functionalities. But the market will also have more job-related robotics operations, like robotics maintenance, robotics management. And I can tell you there are about how to manage the robotics identity, like when we were enrolling any new robots, we found the big thing, what would call this robot, how we will manage the robot. So it's not only about engineering and software development of the robot, but how you will support the robot lifecycle management end to end, starting from the enrollment of the first robot to the last step where you would decommission.

SHAWNE McKEOWN: In the fall of 2020, George Brown College launched an online certificate program in service robotics to address the growing demand for skilled professionals in that sector.

RAMI WEHBE: We have in the program that we did it, the complete program that we did it with George Brown about service robot, which is the first educational program about service robot. There are, I think, two program, two courses about technology, of the main component, about the sensors, about actuator, the software, AI. And there are two courses about something related to the design of the robot, like more about the creativity. And, of course, number four, about the business, how to think of business problem that you will try to solve, because you don't want to bring just a new technology to the organizations. You need to find what kind of business problem we will be able to solve to support a human.

SHAWNE McKEOWN: It's time to take a look at the future want ads.

[cheering]

RAYMOND HARRIPAUL: Yes, kids. Listen up, because these could be the jobs you'll be applying for when you grow up.

SHAWNE McKEOWN: In this segment, we ask our guest to outline a job they think should exist in the future. Okay, Rami, what have you got for us?

RAMI WEHBE: HR expert in robotics.

RAYMOND HARRIPAUL: What will this person do?

RAMI WEHBE: In HR, like, in human resource where we need people to know what is the impact of service robot on our organization, where the people who can put new policies, new practices, new guidelines to make sure, like, we'll be able to address all those questions, so when we adopt those service robot, they are ready, not only from technology, but also from HR. So I think I saw a couple of domains, like where we were talking about, like, we give identity to robotics, how to deal with robotics from, like, taxes, how we will deal with robotics when we automate certain process, how we will deal with the taxes, how we will deal with the operations, with the with the performance of people. Like, so all this domain, we need subject matter experts in those domain who understand the legacy and the current practices and have vision how we will use those advanced technology to empower our enterprise organization.

SHAWNE McKEOWN: What kind of education would be required for this job?

RAMI WEHBE: I think this would be mixed between, like, high-level technology, understanding of the technology and understanding of the organizational change management at HR. I think this kind of next, because when the robot will do any mistake, who will be accountable, who will be responsible? If the human, like, conduct any challenges because of programming the robotics, I think that kind of mix between understanding of the evolving practices and technologies, have good understanding of organizational change management and the cultural management, plus some touch of the HR.

SHAWNE McKEOWN: That's a wrap on this episode of Work Shift. What did you think?

RAYMOND HARRIPAUL: Want to share your thoughts on this episode?

SHAWNE McKEOWN: Email us at workshift@georgebrown.ca.

RAYMOND HARRIPAUL: Get in touch and we might share your thoughts during our next episode.

SHAWNE McKEOWN: This podcast is brought to you by the fine folks at George Brown College. We want to thank Rami Wehbe and Tanya Spasic for sharing their thoughts with us.

RAYMOND HARRIPAUL: It's the end of your Work Shift. Thanks for listening.

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