



# **SDS PODCAST**

## **EPISODE 173**

### **WITH**

## **LEIGH AND DANIEL**

## **PULLEN**



Kirill Eremenko: This is episode number 173 with Founders of CiGen Leigh and Daniel Pullen.

Welcome to the Super Data Science Podcast. My name is Kirill Eremenko. Data Science Coach and Lifestyle Entrepreneur. Each week we bring you inspiring people, and ideas to help you build your successful career in data science. Thanks for being here today, and now let's make the complex simple.

Welcome back to the super data science podcast. Today I've got a very exciting roller coaster of information, and knowledge bombs prepared for you. Leigh, and Daniel Pullen, they're the founders of a company called CiGen which is in the space of RPA. RPA stands for Robotic Process Automation. Robotic process automation is the concept of automating any kind of repetitive task that you might have in your business, or your career. I'm not going to go in detail what it's about right now, because we discussed all of that in depth during the podcast, but at the same time what I will do is I'll give you a brief overview of how this conversation went to be and how it unraveled, to make sure you know where the valuable part for you personally is going to be, so that you don't tune out of the podcast, and miss out on the very important stuff that is relevant to you, which might come down a bit later.

Let's go through this. In the first 30 minutes we talked about RPA, what it's all about, how it works, how businesses get value out of it, and how Daniel and Leigh founded the company. If you're a business leader, a business owner, an entrepreneur, a founder,



somebody who's coming up with ideas to disrupt industries and create new approaches to doing things, then listen up to those 30 minutes very attentively, because that's where the value for you will be. At the same time if you are a data scientist, an analytics professional, a white collar worker even, and you for instance don't have RPA in your business. Your business hasn't implemented robotics process automation, and you might find yourself listening to the first 30 minutes and thinking that, this is great general knowledge, but what's the value in it for me?

Wait up until just after 30 minutes. That's where Daniel and Leigh will share how you as an individual can learn RPA, and integrate it into your career, all absolutely free. There's free online tools that you can learn. Free online course certifications that you can take, and add that to your resume. From this discussion you will see, and feel that RPA is a very underestimated, very underrated new disruptive technology that is creeping up, and that is going to explode the whole market. You want to get on to this train fast.

Then around 40 minutes in, we'll talk about the whole ethics behind RPA. I found the discussion fascinating, very philosophical, and then at the end we'll talk about robots for hire. If you're an entrepreneur and you don't have a massive hundreds of thousands of dollars budget, but you do want to benefit from efficiency in your business and robotic process automation tools, then listen up to that end bit, because Daniel and



Leigh will unravel, or explain a whole new concept of robots for hire.

So there you go, I'm going to stop with the description here. I think that's enough to get you excited. I'm definitely super pumped about this podcast. Without further ado let's dive straight into it and bring to you Leigh and Daniel Pullen, founders of CiGen.

Welcome ladies and gentlemen to the Super Data Science Podcast. I've got two exciting guests on the show today. Father and son, Leigh and Daniel Pullen. Leigh, Daniel, welcome to the show, how are you doing today?

Leigh Pullen: Very well, and thanks for having us on the show. Looking forward to it.

Kirill Eremenko: Awesome. That's Leigh right? Because your voices are so similar-

Leigh Pullen: That's Leigh, yeah.

Kirill Eremenko: Okay that's Leigh. Daniel welcome to you too. How are you doing today?

Daniel Pullen: Thank you very much, yeah good to ... Very good and great to be here.

Kirill Eremenko: Awesome, you guys are Melbourne right.

Leigh Pullen: Correct, yeah.

Kirill Eremenko: The weather as ... Who describe it Leigh? Daniel as you described it's pretty miserable right now.

Daniel Pullen: Cold, and miserable today. Not much [crosstalk 00:04:46] ...



Leigh Pullen: Just to note, just so we see things differently. It's not that miserable, it's just overcast and cold.

Kirill Eremenko: His glass half-full.

Leigh Pullen: Yeah that's the one.

Kirill Eremenko: Okay, gotcha. All right thank you guys so much for coming on the show. It's a very exciting topic. First of all how did we meet? This has been a crazy rollercoaster of connections over the internet. Rachel introduced me to ... Who did she introduce me to?

Leigh Pullen: To Vlad, I think.

Kirill Eremenko: Yeah to Vlad, and he introduced me to you guys.

Leigh Pullen: Yeah.

Kirill Eremenko: How do you guys know Vlad?

Leigh Pullen: The main technology we use UI path, and Vlad is in marketing at UI Path. We've known each other for over two years, because we were the first, or one of the first partners for UI Path, and especially, I think we're the first Australian partner for UI Path.

Kirill Eremenko: Good, where was Daniel located? Sorry, not Daniel Vlad?

Leigh Pullen: Vlad is located in Romania. UI Path started in Romania, which is not a country that most people associate with technology, but they've got some fabulous engineers over there.

Kirill Eremenko: Yeah, they definitely do.

Leigh Pullen: Some great people.

Kirill Eremenko: Imagine this. I'm in Australia. I talked to Rachel who's in the UK. She connected me with Vlad, and Vlad connected me with you guys, who's in Romania. Vlad connected me with you guys who are back in Australia, but in Melbourne. What a crazy world.

Leigh Pullen: The world is a small place sometimes.

Kirill Eremenko: Yeah, for sure. All right, now to the topic. You guys are in one of the most as I would call it, advanced, forward looking, but at the same time underestimated technologies called Robotics Process Automation, or RPA for short. Very excited to share this. We haven't had a guest talk about Robotics Process Automation. I know one of my dear friends, and colleagues ... No not colleague, dear friends, and mentors. He's actually worked with a company that is really heavily into robotic process automation and told me about how it's changing rapidly the whole office and white collar environments in many different countries.

Very excited to talk about this. Could you please give us a quick overview? Maybe Daniel we'll start with you. Could you give us a quick overview of what is robotics process automation all about?

Daniel Pullen: Sure. The best way to think about is, it is ... First of all it's a piece of software. We're not talking physical robots of course. It's a piece of software that can essentially mimic the desktop work that typical white collar workers are doing all day long. Whether it be picking up data from an email, typing data into an application, sourcing data from a website, and using it within the business. RPA is a piece of software that can mimic that action, and do it much faster, far more

accurately, and with practically no errors. It's basically changing I guess the nature of that typical white collar work, in that a person that's been sitting in front of their desk for eight hours a day doing data entry let's say.

You've got an option now where robotics can do that work for them, and then that can empower that worker to do other high value tasks that requires some proper brain power that robots can't yet do.

Kirill Eremenko: A lot of creativity [crosstalk 00:08:42] ...

Daniel Pullen: Exactly right.

Kirill Eremenko: Okay, great. Can you give us a very concrete example? I know, you mentioned like getting data from an email, but for instance, I like the example you have on your website. By the way, Daniel and Leigh have a really cool explainer video on their website, and that was very insightful for me.

So I like the example that you have on the website, where you open the email, and so on, you know, look for this combination of letters, or words. Could you give us a more concrete example like that? Maybe a specific application that, you know, has come up recently?

Daniel Pullen: Yeah, so the robots can read who the sender is. They can read the subject. So if the subject's got specific words in it, that can trigger the robot to go down a certain pathway to carry out sort of actions and extract attachments. Move those attachments to folders. Open up those attachments, be it a PDF, be it the Excel, or something like that sort of nature.

Extract data, so with robots, they can extract digital data. They can extract graphical data.

So for example, if you were to look at OCR, Optical Character Recognition, that's a visual component. So it will take that, and then return that into a digital stream of data. And so we can open up that, extract information out of those attachments for update into other applications.

Those applications can be anything from SAP. It can be a database application. It might be an AI tool to clean up data to go in there so it can recognize more information, or it could be a Citric system, which could be graphical, and therefore you have to use visual components, which RPA is quite capable of doing.

So there's a wide range of locations that you can get your data from.

Kirill Eremenko: Yeah, that's a great example. Just like to mix it up, let me know if this is a bad example I'm going to give as something an RPA could do? For instance, like every morning go onto the New York Times website, and extract of the top news element and then paste it into a word document, and save it into a folder. Is that something an RPA could do?

Leigh Pullen: 100% yeah.

Daniel Pullen: Absolutely.

Leigh Pullen: So anything to do with what they call webscraping, which is basically hitting up any number of websites, getting key pieces of data, and then saving it



somewhere. You can even put that in an email and send it to someone.

Absolutely that's a good example.

Kirill Eremenko: Okay, alright. Here's another one. So for instance, every hour log onto Sequel Server, open up a certain database, open up a certain table, look up the first 20 rows, and copy them into Excel. Put that Excel into ... Take a screenshot of that Excel, and email it to the colleague sitting, you know, like a colleague, whose email you've predefined.

Can and RPA do that?

Daniel Pullen: Yup.

Leigh Pullen: Certainly can. And you could, as much as you suggested, taking a screenshot. You could just as easily save that Excel file and attach it to the email, and send the Excel file itself.

Yeah, screenshot is just as viable, if that's the way you want to do it. [crosstalk 00:12:21]

Kirill Eremenko: I was just trying to make it a bit more complex.

Daniel Pullen: It gets complex.

Kirill Eremenko: So it's pretty much any repetitive task, anything that you like repeat almost in the same way, like several times a day, or several times a week, whatever it is, or maybe several times an hour. You can just like get an RPA to do it for you. You don't have to like do the monkey work.

- Leigh Pullen: That's correct. Yeah, so you're looking for repetitive tasks. You're looking for digital data. You're looking for all the types of processes that are stable, and regular.
- If you have a process that's not stable, it's not the best candidate for RPA because it's changing too much, and like all software, if it changes too much, you've got to tell it what to do. So robots can't go off and think for themselves. They're not smart.
- They're smart in what they can do, but they can't go and think for themselves.
- Kirill Eremenko: Gotcha, gotcha, and so you mentioned these things get complex. What's the most complex example that you can share with us that pops to mind right away?
- Leigh Pullen: I think that complexity for us is typically ... It's not so much the task itself that is complex. It can be the number of variations on the process. So, you know, the example you mentioned before about going to the New York Times website. That's a very straightforward simple process with no variations. So that's quite easy.
- We've come across processes before, where there might be 15 or 20 variations on how to go about the process, and what that means is there are different rules. So we've got a complex set of rules to say, "Okay, in this scenario, path A, or in this scenario, path B, as the pathways expand, then that adds complexity to how the robot has to be directed.
- And we've come across a few processes like that, where you've got many business rules in place that make it interesting to build. Let's put it that way.



Kirill Eremenko: Okay, very, very cool. So then tell us a little bit about like how does this all work. So we kind of now have a better understanding of what RPA is, and what happens next? Does like a business come to you, and just buy the product, and then they're off on their own, installing it, and they can do whatever they like, or do you guys do like consulting, and you like go into businesses and you set these things up for them? How does ... What's the arrangement?

Daniel Pullen: Yeah, we have all the different services that go with implementing RPA. So a client can put in their own technology. So for example, a UI path, and they can learn and create their own center of excellence.

So in other words, get their people trained, and start to learn how to automate processes through the robot, and the workflows and all of that technology gives us ... There are recorders, and things to help people do that, but you have a reasonable map to get to it. It's not insurmountable.

And from a CiGen point of view, we, obviously, we have consulting. We have implementation services. So we will go in and help companies build their center of excellence. We would normally go in and do the first X amount of processes, automate them for them, and make sure they're hardened. And I'll get onto hardened in a second, which is a CiGen term, and some cases we manage the installation, and we manage the COESLs. We provide the service for that.

And we have another service, called RPA Robots for Hire, in which small companies, and medium companies come to us. We do all of the work, and we

have our own fleet of robots, and they use our technology and we do all of the work for them.

So that's a smaller companies that would never go and put it in themselves because they don't have the people.

Kirill Eremenko: Gotcha, gotcha, and you mentioned UI path. What is a UI path?

Daniel Pullen: UI Path is one of the top three RPA vendors or solution companies, globally. They're probably at about the top now. Somebody ... The company that we deal with, we're not agnostic in our RPA approach. We are a UI Path partner, and decided that rather than go wide with different RPA technologies, we prefer to go up the AI tree, which means, RPA is part of the AI tree.

It's [inaudible 00:17:25]. So we'd rather add other AI products as they become available, and suitable, that become available for the marketplace.

Kirill Eremenko: Okay, gotcha.

Daniel Pullen: So yeah.

Kirill Eremenko: And so UI Path, that's where Vlad works, right?

Daniel Pullen: That's where Vlad works. That's right. And they're growing at a very fast rate. We started with them at the beginning of 2016. There were around 45-50 people. Today, there are about 700 people.

Kirill Eremenko: Wow!

Daniel Pullen: And they are growing all over the world. They've got offices, head offices now in the United States. Their engineering is in predominantly in Romania. They

have services everywhere from India to the UK, here in Australia, right through Asia, Japan, et cetera so.

They're growing strongly. They've got good money behind them, and they've got an excellent product, and they're putting their money back into the product, and it's expanding all the time. So we're extremely happy with our choice.

When we chose a few years ago now, a couple of years ago.

Kirill Eremenko: Nice. I gotcha. So they built the core of the RPA, and then-

Daniel Pullen: Yeah.

Kirill Eremenko: You like ... Do you add things on it, or you predominantly focus on-

Daniel Pullen: We can! We can ... The beauty of UI Path is the ... Basically, think of Visio, and UI Path allows activities to slide in. These are all pre-built, but you can build your own, which we can do, and UI Path is like the best of both worlds. They have ...

You can code. So we do use a bit of .NET code, or something like C code. In fact, I'll be putting Python code into it at the next release next week. And they can do all of these different things because you come across all different scenarios that you have to solve.

So in an RPA, you've got to solve different problems with different applications, and data.



- Kirill Eremenko: Gotcha, gotcha. Okay, and I'm glad you mentioned CiGen because I haven't yet mentioned the name of the company. So it's CiGen, C-I-G-E-N .com.au
- Daniel Pullen: That's a good question, actually. So what it technically stands for is computational intelligence generation. CiGen, for short. It's not terribly scientific. I'm just trying to remember back to when we first came up with it.
- Daniel Pullen: Depending on what source you read, computational intelligence either sits alongside or is a subset of artificial intelligence, and given that, and RPA, everything that we were looking to do, as a business, was in that space. We liked the name. It had a nice ring to it, and here we are.
- Kirill Eremenko: Yeah. Nice, and how long ago was that?
- Daniel Pullen: Started the company at the end, or sort of the back half of 2015. So we're sort of coming up on three years old now.
- Kirill Eremenko: Okay.
- Daniel Pullen: It's gone very quickly.
- Kirill Eremenko: Cool and I like these conversations about starting companies because I'm always interested to find out what kind of thinking drove you to see that this technology has a potential, has a future, and bet your money, bet your time, and energy, on building this enterprise in order to pursue this technology.

Like tell us a bit about what thinking went into that, and what was the inspiration, and why were confident or courageous enough to actually pursue this goal?

Leigh Pullen:

I was probably the one that sort of came up with the idea first. I had been reading about, and looking into various articles about robotic process automation. Obviously, going through some of the scary parts of it, and some of the really interesting parts of it, I have a fairly reasonable IT background across ERP, CRM, contact [inaudible 00:21:57] technology, ICT and that sort of thing.

So I sort of go back a while with technology, and I started to realize it was new. It was barely around, and I was either feeling ... Whenever you start a business, you think it's going to be easier than it is.

Kirill Eremenko:

So true.

Leigh Pullen:

And so ... I was a sort of point obviously in my life, where I thought it might be a good thing to start, and I grabbed Daniel, and so we thought we'd start going down this track. And at the very beginning, I had in mind that we would write some code for, the term is ITSM, IT Service Management Disc.

Then I realized a lot of this is all written. So there was no point reinventing the stone because they were far ahead of where we would have been. So it's better to look at the services side, look at how we could use it, and start from there, and that's exactly what we did.

Kirill Eremenko:

Yeah, this is a good [crosstalk 00:23:01] and at this point maybe, if you don't mind commenting, like what is the difference? Like why would a company go to you



guys, rather than go straight to UI Path? What is the value-

Daniel Pullen: Well, UI Path doesn't provide the services, it has services people, but they don't directly implement the technology for all of the different clients. They have partners for that, and we're one of the partners.

Kirill Eremenko: Gotcha.

Daniel Pullen: So that was a model, first up, so.

Kirill Eremenko: Gotcha. Okay. Makes sense. And I'm glad you guys brought up AI. So let's go into this a little bit. So RPA, robotics process automation, is, as you put it, a pathway of AI. Just for my podcast, I like the way you put it that it's a part of the AI tree. So tell us a bit more about that, like how do you see robotics process automation fitting into this whole AI tree?

Leigh Pullen: I'd say RPA is probably at the ... It's kind of the ground floor, if you will, in the sense that we often call it the grunt worker. So RPA is the tool that can go in there and basically grab or move around a lot of data, grab lots of data, potentially clean data, then it can pass on to another application, be it machine learning, cognitive computing, AI, and feed it into that tool.

A lot of AI tools typically require large amounts of data to be effective, and so RPA can be a good engine to get that data quickly and independently without people having to get in the way.

So it can go both ways, where you can get AI tools feeding data back to RPA. So it can be circular, but more often than not, you'll have AI being the starting



point for effectively generating large amounts of data to feed into AI.

Kirill Eremenko: Gotcha. Okay, that's what you mean when you say it's a pathway to other parts of artificial intelligence, that it is-

Leigh Pullen: Correct.

Kirill Eremenko: -enables them. Right? Okay.

Daniel Pullen: Correct.

And what we're expecting to find is that as ... I mean, I'm not saying the RPA is mature at this point. It's certainly still growing, but the tools themselves, and what they can do are fairly well established now. We're not seeing that quite yet, or quite as broadly with other AI tools.

So as that starts to mature, then you'll really start to see, I think, a real interplay between RPA tools, cognitive tools, machine learning tools, et cetera. It will become ... But it's already heading that way now, but it will become basically like a huge ecosystem between different tools that do specific things.

Kirill Eremenko: Gotcha, and [crosstalk 00:26:04] Yup. Yeah, sorry. Go ahead.

Daniel Pullen: I think there's one other area in here that the RPA tools themselves are an universal tool, if you like, a global tool across that any business can use across all of their applications, and so they can get one RPA tool to serve across their platforms, whereas AI tends to be industry specific, or there are some tools that are generalized, but most of the AI tools that are out there

are, for example, the legal industry, or they're for the insurance industry. They've been built specifically for those.

As far as RPA kit is concerned it doesn't care which industry it is, it can work across all of them.

Kirill Eremenko: Exactly! And those are such great points. First one is that ... That's exactly why I think that it's such an undervalued technology, or underestimated technology that data scientists across the board, they maybe recognize better that ... How do you get this data into AI?

A lot of time people spend hours and hours and hours programming different algorithms or different webscraping tools or different approaches to extracting the data, whereas this might be much faster to actually implement and existing RPA, and because as I understand an RPA is just a drag and drop, right?

It's like you can set it up without knowing any programming skills. Is that correct?

Daniel Pullen: Yeah, the interface, the UI Path interface is essentially drag and drop. I mean, if you've got good skills with coding, C-sharp, or VV.net, then you'll be right at home because it's based on that platform, but equally, you can drag and drop activities.

Leigh and myself are not programmers by background. It's something that we've effectively picked up, whilst learning UI Path. We both had some skills in writing macros, Excel macros, from my background. That was kind of the extent of it really.

So it is, as a tool, it is quick and easy to pick up. There are recording features within the tool, not dissimilar to a macro recorder, but a little higher spec, to help you get started, and there's a lot of material on the web via UI Path, most of which is free, or practically all of which is free, to help you get trained up.

So, you know, if you have an interest in that sort of thing, and you've got a, I guess, a good analytical mind for that kind of discipline, then you can pick it up and run with it fairly quickly, and you basically build your skillset as you go along. So going in and scraping that off the web, you know, that's fairly simple to learn, and fairly simple to implement.

Kirill Eremenko: Gotcha, gotcha. I guess a way to build an analogy for our listeners is that in data science we have tools for programming, and have tools for visualization, like drag and drop tools for visualization, like Tableau, and so to build a visualization, you could go and build it in R programming. It will take you, I don't know, a couple of hours, or you could build it in Tableau with drag and drop in like 5 minutes, and plus, if you need to adjust it, or change it, or you know, modify it with time, then you can just do that modification in the drag and drop tool within a few minutes. Whereas in the programming language, you are going to have to add the bit of, you know, code to the whole thing.

So just my way of interpreting this whole thing of RPA, that it's actually quite empowering for people or companies that want a specific task automated. You don't have to sit and code a specialized AI, where there is machine learning, or webscraping algorithm for a

specific task, if you an RPA you can quickly adjust it.  
Is that about right?

Daniel Pullen:

Yeah, look you spotted it. With the RPA tool, it's very much designed to allow non-coders and non-programmers to feel like it's accessible, and to feel like it's a tool they can use.

RPA in many cases, or quite a few cases is actually used within the business units themselves. It's not necessarily something that your IT department has ownership of. They're very much part of the journey, and this depends on the company of course, but they don't always have ownership of that tool.

So oftentimes it's the business users themselves, and business analysts, and process analysts that are the ones that ask to learn this tool. And many of them will have never cut code before, and so the drag and drop functionality, and the visual aspect of the tool is crucial to getting them feeling at home, and like it's a tool that they can use.

And that was very much the case with Leigh and I, when we started. There are visual cue that are not necessarily used as part of the automation, but they can give you some context for what you're doing, what data you're working with, what program you're operating within, or application. And all of that's designed to, I guess, minimize the feeling that you're actually working with code.

Kirill Eremenko:

Yeah, totally. I understand, and that's a great refreshing perspective.

Okay, and so the other thing is that you guys ... What I wanted to ask you guys is that, in the three years that you've been in this business, what kind of ... Have you noticed any trends? Have you noticed like an increase and uptake, an increase in interest from businesses, an increase in requests to implement RPAs? Where ... Like is the whole starting to pick up on this idea of RPAs more and more, or is it kind of like still in its very juvenile?

Leigh Pullen:

It is definitely picking up quite strongly. It has still got a huge way to go. So it is ... RPA really got going in Europe and the UK first. It's got going in the USA a little bit later, but the uptake in the US has been very strong now, and it's probably surpassed Europe.

Australia, Asia Pack, Australia has probably ... It's starting to move and move quicker now. So two years ago, we were still explaining to people what RPA was. Last year, people started to understand that it was around. Today, we don't need to really explain to companies what RPA is about. It's more about what it can do, what we can do to solve their problems, and sometimes how quickly we can implement things to work for them because yeah so.

Kirill Eremenko:

Gotcha. That's really exciting to hear. Speaking of uptake, and the whole AI situation, I think it stands to show that RPA is being recognized more and more by the industries and companies. It stands to show that you guys got the CIO advisor award for one of the top 25 top artificial intelligence companies in Asia-Pacific. Congratulations on that.

How did you guys feel about it?



- Daniel Pullen: It was great! It is always good to get awards, and it's good to be recognized by your peers to get you awards. So no, it was a great achievement. It's a ...
- We were surprised and very happy about it.
- Kirill Eremenko: And in the space of AI as well, right? So it's the ...
- Daniel Pullen: Yeah. That's right.
- Kirill Eremenko: And it's a testament of ...
- Okay, cool. So I had a question, so indeed we have on the podcast, we have listeners, who are entrepreneurs, and executives, and directors, who are business owners. I'm sure by now they're brains are churning, and they're thinking, "Okay, how can I get this whole thing of RPA into my business? And how do I implement these solutions?"
- So you'll definitely get a lot of people contacting you. By the way, do you guys work just in Asia-Pacific, or like Australia, or do you work globally?
- Daniel Pullen: We have had customers as far as the US, but we generally stay Asia Pack. Predominantly because of travel. When companies want to see ...
- But we are connected with sister companies that we can help people with, and of course UI Path can too so. So no, it's very much a global thing that ... you know, we're connected to quite a few people.
- Kirill Eremenko: Great sure. Okay, cool. That's good to know. So my like prolonged question was that, we've got business owners, who are like now, obviously getting a lot of value and wondering how they can use this in there

businesses, but what about listeners, who work in companies, which don't yet employ RPA, which don't yet have these tools that they can practice.

Like it all sounds nice and exciting to them, but is there a way that they can learn a bit more about RPA? Maybe get their hands on it, like do a trial, like just as an individual. Download it on their home desktop, or you know, just get their hand dirty to understand how this whole RPA system works and get a feel for it, in order to understand better if that's something they want in their career, if that's something they want to consider learning for the future.

Leigh Pullen:

Yeah, UI Path makes that really easy actually. So you talked about a free version, or a trial version. You can access that via the UI Path website. There is actually what they call a community edition of the software, which is free to use, for individuals, and free to use, if you're in the learning or education space.

So getting access to the software is simple, and then on top of that, UI Path has got their forum, their community forum, which is, I think, well over 10000 strong now, in terms of members. You've got quite a few UI Path people that are on the forums quite actively, and some long-term users as well that can answer questions, and give great examples of how to do things.

And you've got UI Path Academy, which is a free online course. It's all modular based, where each module is based on a certain topic, such as Excel automation, or web automation, or scraping data from a PDF





document. Modular goes for an hour, or a touch over an hour.

And at the end of all that, you actually get a certification as well.

Kirill Eremenko: That's so cool.

Leigh Pullen: So yeah. All the tools are there for people, who are curious to jump in at practically cost, and start learning the tool, and building their own automations. And for those, within businesses that are not yet using RPA, it's a great way to maybe showcase the tool, and what it can do, and maybe get some people within the business interested to implement it at a larger scale.

Kirill Eremenko: Wonderful. I love that. Actually, I could feel myself getting excited about all this as you were talking, and I'm sure this is the point in the podcast, where, like the light bulbs are starting to go off, and people are like, "I can try this out for myself!"

And I imagine this [crosstalk 00:38:18] Yeah! Imagine this, somebody goes on like the UI Path website, and downloads the software, tries this community version, goes into the forum, and does the UI Path Academy, gets the certification, all of that for free! And then adds that to their resume. And it's like all of a sudden, you know, you're not just a great data scientist, all of a sudden you have this skill that pretty much nobody else has because it's so powerful, or it's so underestimates, yet so powerful, and then you go into an interview, and you're like, "Yeah, I know this thing called robotic process automation."

And they're like, "What's that?"





And, "Well, I can automate half your processes, and save you like ten million bucks, Babe, because your people can be doing more creative and work and finally get over their backlog."

And they're like, "Whoa! This is so cool!"

I'm really glad you mentioned that, and also this showcasing your own business, so if you are not looking for a job, if you are already happy with your job and everything is going great, and you love your company, but you want to add more value, you know, check out robotic process automation. You try it out for yourself and you see how exactly you can empower your own role and automate some of your tasks, or maybe help your colleagues automate tasks, and all of a sudden you have a business case for your manager, and your company is going in a whole new direction, as opposed to where it was going.

That's such a great right. I think I should mention that in the intro to this podcast, that this is available to everybody, not just business owners. Very cool. Thank you so much for sharing that.

Leigh Pullen:

Yeah, sure thing. And look the whole, I guess the whole perspective, from UI Path's point of view, is they're all about what they call democratizing RPA. So you know, they're take on it is that it should be accessible to everyone to learn.

And then CiGen's twist on that is that, I guess, the common theme within industry is that RPA is for big business, and for enterprise customers. Our twist is that we think RPA should be accessible by all

companies, the sole trader, the small business, the medium business, and of course the large enterprise.

So it's not simply a tool that is for an [inaudible 00:40:42]-listed company, and that's it, or a Fortune 500 company. It goes way beyond that, and it's got the ability to give real benefits to companies of all sizes.

Kirill Eremenko: Yup, yup.

Daniel Pullen: I think the other part of this that we haven't mentioned is that where the robots live. Robots live on the desktop, but more often these days, corporates, and indeed our robots sit on servers in data centers, or in the cloud.

So robotics is not actually seen that often. You don't actually see them work because it's all done, generally in the background, and to the point of ... One of the other points with people learning robotics at that moment, there is definitely a shortage in the market for the people who know robotic process automation so.

Kirill Eremenko: Yeah, and that's a very powerful point as well, that as you guys get the word out there, and UI Path spreads its democracy idea.

Okay, by the way, Vlad did such a good thing to get you guys on this podcast, like the best marketing move ever. We've mentioned UI Path like 20 times. He's going to be happy for sure.

Daniel Pullen: Works both ways.

Kirill Eremenko: Yeah, yeah, for sure. Though as this message is spread out there, the demand for RPA is going to grow. You'll see companies ...

Again, it's inevitable, we live in a capitalistic world, competitive pressure is going to drive the demand up. Companies that don't employ RPA are going to have more costs, and are going to be less efficient than companies that do employ RPA, and therefore, whether you like it or not, the demand is going to go, and in that point, it's like where is the supply going to come from.

The same thing as we saw in data science, right? Like five years, or ten years ago, there was no such thing as data science, and now all of a sudden, every single business in the world is starting to want a data scientist, and where there is a demand, and now people are starting to pick up these skills. "I want to be a data scientist. The salaries are really high. It's a very exciting job and profession."

It looks like RPA is going down the same track, so it's a good idea to get on this early, especially if you can learn all these things for free and add it to your resume with a certification, and then all of a sudden in a year, two, three, the RPA ... A lot more companies catch on to the whole RPA trend, and people are looking for skills and the supply of skills.

You've got to have at least three years of experience in RPA because you got onto this early, and that's what people usually put on the job description, like we want X years of experience. Well, usually they can't ask for the X years of experience because it's such a new



thing, but if you are forward looking and you add this thing, you like learn this thing very early on, that could be a very powerful career move for somebody.

Daniel Pullen:

Yeah, it's a good ... Well, obviously we're bias because we're in the market. We're in the space, but we think it's a great space to get into. We enjoy the work. I mean one of the things for us, as implementers is we get to run the breadth of process types and businesses.

We get to see every customer presents an entirely different challenge. They're often using different applications. They have a different way of going about things, and so it forces you to stay on your toes and continue learning and continue thinking.

You can't just have one playbook, and roll it out over and over again. It doesn't work that way, and so that for us is exciting because it keeps things fresh and it keeps you sharp.

And in terms of expansion, Leigh touched on before that, you know, growth-wise, there's still a tremendous amount of growth to go in the market, and what we're starting to see evidence of, albeit in small steps is that the larger corporates are increasingly starting to lean on the next tier down, and say, "Okay, well, we've got robotics. So where's your robotics?"

And so it's gradually being forced top-down from the large corporations down to the mid-size and mid-tier corporates because people are demanding savings, and so that, to us, is just going to fuel the growth over the

next few years as well, as the mid-tier starts to uptake RPA in a serious way.

Kirill Eremenko: Interesting. Very interesting to see something pushed in like that direction from top-down. Usually it's like companies at the bottom come up with something cool, and it gradually trickles up to the top, but yeah. That's an interesting approach.

Daniel Pullen: Yup.

Kirill Eremenko: Okay, well, that's very cool. I've got a question for you guys. So you've obviously worked with lots of companies, and done lots of different implementations. What would you say has been the most disruptive example that you have to date of how you implemented RPA, and it saved a company?

You don't have to name the company, but like you know, it saved the company, I don't know, a million dollars, or it helped 50 people in the business become free of these repetitive tasks, and move onto greater and better careers, or greater and better things that they were doing in the same business, or helped a business take over a market, or get into a niche. Anything like that that you can share?

Leigh Pullen: Yeah, there's probably a few. One of them's a utility company. They do 1000-2000 entries a day because they have [inaudible 00:46:45] and changes of a lot of different types of meters. That's been roboticized, and that's relieving a team from data entering all of that data every day. That's had a reasonable impact within the company, and it's expanding.

There are some of the more interesting things that we come across, where we use robots for revenue leakage, to detect revenue leakage. So you ...

Kirill Eremenko: Tell us more about that.

Leigh Pullen: So this is, for example, some businesses know that there are points within the business that they're not picking up the data to invoice correctly.

No, I won't use a bank as an example because we all love banks. So for example, you take a port where they have every time a container touches down at a different point within a port, there's a charge for that. And if it gets missed, they don't get to charge that amount of money to a client, as an example. So the robots may be used to make sure electronically all of the touchpoints are working.

So there is a number of different ways, you take ... Certainly, if you take people out of the loop, you will find that the invoicing will increase. That's the case especially in a bank. If you have sort of bounced checks, or something like that, where someone would have gone into a branch before to relieve it, to talk to the manager. These days that's all done by robotics, and it's just automatically billed to that person, and companies are using some of those revenue leakage ... The gain that they're getting from all of that to pay for the robotics program.

It's quite big, so it's one of the things. It's not just the process, you get companies to start thinking about where are you missing revenue from? And then of

course, the other one, the part of that is audits. Robots are great with audits. So, yeah.

Kirill Eremenko: So it's like a self-fulfilling prophecy?

Leigh Pullen: To a degree, yes. They can pay for themselves, yeah.

Kirill Eremenko: Gotcha, gotcha. Speaking of price, I won't put you guys on the spot, and ask you to price cost, but roughly where do these things range from? Can you give a ballpark estimate of from X to Y is usually what a company of, I don't know, and average size would pay for a robotics automation and the implementation.

Daniel Pullen: It's not expensive really. In the scheme of large corporate applications, it's nothing like that. So it's in the hundreds of thousands of dollars. It has gone up to over a million, with lots of robots, and I mean hundreds of robots. That's not as common yet.

But you know, companies with anywhere from 10-15 robots, you're in the hundreds of thousands of dollars. So quite a few companies, around 100000. So probably 100 to 200 thousand dollars, I guess, for a reasonable corporate to start with. That's not too bad.  
[crosstalk 00:50:25]

Kirill Eremenko: Very reasonable.

Leigh Pullen: They can build to that over time. So I mean, the actual entry cost to get started is actually incredibly low. Once a business has a realistic idea of exactly how many robots they need, then they can scale very quickly. So I would say that, if you are looking as a starting price, you'd be sitting somewhere, not even \$100000, maybe around 50k to actually get it in and



get going in a serious way, and then build over time, build your capacity.

Daniel Pullen: Actually the smallest value is zero because you can put trials in there. So you go from that point up.

Kirill Eremenko: Yeah, yeah, you betcha. Okay, that's very cool, and definitely very reasonably priced. And what's your view on the whole ethical consideration that implementing robots means that in some cases people will lose jobs?

It's definitely good for business, efficient for business, but like we hear these things, like with self-driving cars, that drivers and taxi drivers are losing their jobs, and things like that. I guess it's an inevitable step in technological progress, but how do you guys deal with it ethically? What helps you sleep at night?

Daniel Pullen: Believe it or not, it's something we talk about a fair bit in the office, considering the work that we do. I will say that to date, despite what is written in the press, and what people might have heard, we're not seeing the mass job losses, and mass sackings that people seem to be concerned about.

We're seeing a lot of businesses that are genuinely looking to take their headcount and utilize it in other parts of the business. A lot of the companies are excited by the fact that they may not have to necessarily expand their headcount and can grow their business with the same people.

That's powerful, especially to really smaller businesses, that's a really powerful reason to go with RPA.



I guess, if you talk about the ethical side of it, something that we do talk about a fair bit is empowering people to learn the tool. So if you're in a white collar-typ job, and let's say you are doing lots of data entry, absolutely your role, or parts of your role can be at risk from a tool like RPA, and so we would go back to exactly what you were saying before, which is you've got the tools and you've got the avenue to learn the tool, for free online, and all it takes is your time.

And so we would encourage people to at least take a passing interest in it and learn the tool, because if your job is going to be affected by RPA, then you may as well turn the tables and be the person that can use RPA.

Kirill Eremenko: Good. I love it.

Daniel Pullen: Yeah, I think that that is probably the most succinct way I can put it. I'm not sure if Leigh wants to add to that.

Leigh Pullen: There's no doubt over time RPA, especially once AI becomes stronger, and they join with machine learning, and all of this sort of area that there will be a greater impact, and certain industries will be impacted more than others. And it will mean that entry level jobs will start to disappear in certain areas, and so the question ...

One of the big things with entry level jobs is it's where we learn to work, in reality, and so from that point of view, if we're bypassing the learning to work, how do we get to become suffice to take ... Say I'll pick on the

accounting profession, which will be heavily affected, is becoming heavily affected by robotics and AI.

So if I want to go through to the stage of being an advisor, if I don't have the entry level, where I learn all about accounting, how is that going to happen?

Kirill Eremenko: Hmm, interesting.

Leigh Pullen: And so we sit and talk about having experiential labs at tertiary and probably secondary college that will take people through ... I don't want to get into Star Trek, but starts to go down the path of learning tools that immerse somebody in learning, so as they come out of those, they have actually got some skill in dealing with and identifying and dealing with those types of topics

Daniel Pullen: You're talking basically like a simulation?

Leigh Pullen: Correct.

Daniel Pullen: Yeah, I mean, if I think back to when I came out of uni, I did a finance degree. Coming out of uni, my first few jobs were all finance analyst, and data analyst, and yeah, in the next five years, those kind of jobs will be heavily affected, and so.

That's a completely different side to the ethical question is yeah. How will the kids that are in school now, how will they learn the skills that they actually need to actually get to the higher levels, if the lower levels simply disappear?

And that's a far bigger social problem than people are currently aware of.



- Kirill Eremenko: That's a definite ... Yeah, definitely. I didn't think of it that way.
- Leigh Pullen: Yeah. So in a similar way, that blue collar work has been [inaudible 00:56:34] white collar, it will have an affect. It will become a political issue obviously. But it is also an opportunity issue, because if you stop and think about it from the point of view of education, there's a whole new world of technology and business that could start up around that type of area. So.
- Daniel Pullen: Yeah.
- Kirill Eremenko: Yeah.
- Daniel Pullen: In the same way that we couldn't imagine ten years ago that there would be an industry built around apps and building an app for a phone.
- Kirill Eremenko: Yeah.
- Daniel Pullen: And look at that industry now. We could have little niche industries building around robotics in exactly the same way over time.
- Kirill Eremenko: Yeah, as they say, the world's biggest problems are the world's biggest opportunities.
- Daniel Pullen: Yeah.
- Leigh Pullen: Yeah, absolutely.
- Kirill Eremenko: Very interesting this talk-
- Daniel Pullen: It's not yet! It's not going to go away. It's definitely not going to go away.
- Kirill Eremenko: This podcast has taken such an interesting turn! We're going into philosophy and social considerations. This

is so exciting. Wow, you guys are definitely in a very interesting industry. I am very ... And no wonder! Like in addition to that award, you were also featured in Australian Financial Review.

I can now see why these things are all happening. Very exciting. Unfortunately though, we are slowly coming to the end of the podcast. We've been here almost an hour, believe it or not.

I wanted to touch on one thing that you said that you are also very passionate about before we wrap up: robots for hire. Tell us a bit about that. What are robots for hire? This is like a next step in RPA, or what is it all about?

Leigh Pullen:

Yeah, look it's an evolution of CiGen's business model, we have our traditional model, which is implementation, training people within companies to use RPA, and that's based, of course, on companies buying the technology and installing it.

But we also recognize that there are many smaller companies that would A: never make the investment. As much as it is accessible and affordable, in our eyes, there are still many companies, especially a small business ... A small business can only spend money on something better. There's always things to spend money on. So RPA in that respect, probably goes towards the bottom of the list.

We believe quite firmly that those businesses should still have access to the benefits, and so robots for hire is basically a service where we host.



We have our own fleet of robots, which we host ourselves. Now, so all the tech is hosted at CiGen. Small companies can come to us and say, "Look, I've got this process. I get, you know, a hundred invoices a day, I need to get certain pieces of information out of that invoice and put it into my accounting software. It's currently taking on of my people half a day to do that work. I'd love it if they could do something else."

And that's where our service can come in. We will build the automation to handle that work, and we deploy it at our end, or on our servers, and effectively do that work for them, and allow that person to have their half a day back to do something more constructive for that business.

So at the moment, the types of applications we work with are cloud-based. So we're not doing B to B to the business at this point. That will come in time. So a good example is cloud applications, such as Zero or NetSuite, where everything is hosted online. You've got your login, you've got your data, and it's basically a case of inputting your data into the software, and our robots can do that far quicker, far more effectively, and for a far cheaper price typically than a person can.

- Kirill Eremenko: So you're getting into disrupting the virtual assistant space now. You're disrupting everything, guys! C'mon!
- Leigh Pullen: Yeah, we're trying to get in everybody's way basically, yeah. I mean, what we've heard from small businesses is, and you don't think about it at a big business level, but you know, half a day of one person's time is ... Having that back is powerful.

And again, it's not about getting rid of these people. A small business may have only six or seven staff, but having one of those people do something else for half a day, such as getting on the phone and talking to customers, chasing up leads, is far more beneficial than having them sit there for eight hours inputting data entry.

Kirill Eremenko: Yeah, gotcha, and how affordable [crosstalk 01:01:26] is this? I'm sorry. You go.

Leigh Pullen: Yeah, so it's designed ... So the pricing is designed to compete with labor. So we're well aware that typically we're competing, or pricing against administration staff, and so depending on the complexity of the workflow, and how long it takes us to build it, and get it ready to go. It can be as little as \$100 a week.

Kirill Eremenko: Wow. That's fantastic.

Leigh Pullen: So it's not meant to be expensive. Typically, the processes that we see, they're not large complicated processes. They are literally as simple as, "I've got a bunch of invoices. I need to get them into my accounting software as quickly as possible so I can move onto the next task."

So they're simple, non-complex processes such as that.

Kirill Eremenko: Gotcha.

Daniel Pullen: Or, as we've also done is recruiters. So actually doing some data cleanup work on a recruiter's database. There's another example of it. So.



- Kirill Eremenko: Nice. Very cool. Guys, this is so exciting. I would love to keep going about more of the [inaudible 01:02:41], but we have gone over an hour. Thank you so much for coming on the show. Quickly before we finish this off, tell us how our listeners can best get in touch with you to learn more about RPA for their careers, or get in touch about maybe some products that they're interested in.
- Daniel Pullen: Well, I'd go to CiGen.com.au, which is our website. That will get to us. I think our phone number is on there as well, which is obviously Australia +61 and so that number is at the bottom of every page on there. There is a contact at @cigen.com.au, which will get to us.
- And then if you wanted to get to us individually, it's either leigh.Pullen@cigen.com.au or daniel.Pullen@cigen.com.au. We've got other staff, but that will come to us so.
- Kirill Eremenko: Perfect, thank you, and is-
- Leigh Pullen: And that's C-I-G-E-N.
- Kirill Eremenko: Yup, and important for our internationals is .com.au Australia has it's own kind of world of internet websites .com.au
- Leigh Pullen: Yes.
- Kirill Eremenko: And LinkedIn. Is it okay for our listeners to get in touch via LinkedIn?
- Daniel Pullen: LinkedIn and Twitter.
- Kirill Eremenko: LinkedIn and Twitter.





- Daniel Pullen: So we're on both.
- Kirill Eremenko: We'll include those links in notes.
- Well, thank you so much, guys, for coming on the show. I really appreciate it.
- Any books that you would like to recommend to our listeners? [crosstalk 01:04:14]
- Leigh Pullen: Well, one of the early books was the Second Machine Age. So Andrew McAfee. That was one of them. Another one was the Great Fragmentation, which is probably a little bit beneficial since we just ... What we've been talking about. So there are a couple of interesting books that were probably part of the reason why we went into it. So yeah.
- Kirill Eremenko: Daniel, do you have anything to add to those?
- Daniel Pullen: No. We'll stick with those two. Leigh reads more than I do.
- Kirill Eremenko: Alright, gotcha. Alright, well thanks again so much, guys, I really appreciated this chat. I'm sure it's going to change a lot of lives and a lot of career paths.
- So I appreciate you coming on the show and telling us all about RPA.
- Daniel Pullen: Thank you.
- Leigh Pullen: Thank you.
- Daniel Pullen: Thank you very much.
- Leigh Pullen: And thank you very much. [crosstalk 01:05:09]
- Daniel Pullen: That's right, and it's been a pleasure so.





Kirill Eremenko: Alright, take care, guys, thanks.

Daniel Pullen: Thank you.

Kirill Eremenko: Alright so those were Leigh and Daniel Pullen. Thank you so much, guys, for coming on the show. Also thank you, Vlad, for introducing us.

And what was your biggest takeaway? Right? Isn't this pretty insane how much value the guys shared and how many new insights, like Robots for Hire, ethics around RPA, what is RPA, RPA for individuals, RPA for businesses. Whatever role you are coming from, you can get tons of value, or tons of directions from here, on how to incorporate, or at least explore this new space, constructive space, of RPA in your career.

So personally, for me, I loved it all. We will definitely include all of the links in the show notes, which you can find at [www.superdatascience.com/173](http://www.superdatascience.com/173), there you can find the CiGen website, the UI Path website as well. You will also be able to find the links to Leigh's and Daniel's LinkedIns. So make sure to connect with them and get in touch.

If you're a business owner, especially if you're in Australia and you're thinking about RPA, they're the best guys to go to. Make sure to check them out. Plus, as they mentioned, they can connect you with other people in the world, in the space of RPA, if you're not in Australia.

On the other hand, if you're a data science analytics professional, and you want empower your career, and put RPA and even a certification on your resume, then head on over to the UI Path website and check out



their course there. That is over the community forum, community version, free trial of their software, UI Path Academy on certification and things like that.

We'll include the links in the episode on the show notes as well. On that note, if you know anybody who can benefit from learning about RPA, anybody who is curious about technologies, who is looking to disrupt industries, or disrupt their business, or disrupt their own career, or empower their own career, and add more value to the places where they work, then send them this episode.

Share the story of Leigh and Daniel and the whole concept of RPA, and you might as well just change somebody's life or trajectory of their career.

On that note, thank you so much for being here. I can't wait to see you next time. Until then, happy analyzing.