FEDERAL TECH PODCAST

How Federal IT can Leverage Artificial Intelligence

SUMMARY KEYWORDS
ai, technology, deploy, data, agency, artificial intelligence, company, human, federal government, people, paul, fraud, challenges, dod, customers, years, applications, talking, honestly, understand

00:00
Welcome to the federal tech podcast. My name is John Gilroy and I'll be your moderator. Today we're gonna talk about artificial intelligence. And our guest is Paul dilla. Hey, he's a president and CEO at a company called Empower AI. Paul, how are you today?

00:18
Great, John, thanks for having me.

00:21
You know, I think a lot of people know the company, the original company is NCI, I think the newly branded company is called Empower AI, perhaps for the benefit of our listeners, Paul, you can give us maybe a thumbnail sketch of what's happened in the last couple of years.

00:33
Sure. So I've been President CEO for the last six years, and part of the mandate when I came in was to really assess how this business could differentiate itself as a small mid tier company we were kind of struggling along with with modest growth. And so we took a hard look, we did an assessment, we concluded that the thing to do was to really start to invest in artificial intelligence, with the purpose of teaming that up with our human workforce, and being able to compete with some of the larger players in the marketplace, leveraging built that technology and in the strong domain expertise that the legacy companies always had.

01:14
If you look at just the federal government last five or six years, and obviously been inundated with all kinds of data, all kinds of new systems, from the satellites, the oceans everywhere. And what's happening is, is that many agencies are noticing there's more data they can handle. I love this quote from a Brian Papp over at Cisco. And he said that there's too much data and not enough people to understand the data. And so this is the gap where AI fits, is that correct?

01:39
Yeah, it really is, I mean, the ability to get through data, once it's cleaned and tagged and everything is, is it's unmatched by human potential. So you can you can scale your human workforce to manage the large amount

of data that the federal government is collecting. There's another benefit to it. That's that, that I read a study that said that 65% of the federal employees are experiencing burnout, through managing, you know, all the challenges that these agency have around particularly around their data. And then 49% of federal employees are evaluating whether or not to resign in the next year. And I think that's where AI can step in, and really, really help take some of that burden off the federal employees by, you know, being able to synthesize that data, provide recommendations, and at a speed, which is just

02:31
unmatched. And this is a common commonly held opinion, I think, you know, if you look at the executive order from December 2020, we talked about making this big move. Now, what I see many times I see these policymakers, and they're talking about all these bills they have for artificial intelligence, then the implementers. And then old Paul, here's the middle of this, and he has maybe explained both or justify both the work with both. So this seems to be a dichotomy with artificial intelligence, especially for the federal government, isn't it?

02:59
Yeah, it is. I think there's a there's there's obviously a lot of challenges. Anytime you're you're adopting new technology, particularly in a relatively large bureaucracy, maybe the largest in the world, right. And I say that, in reality, it's not it's not shot at anybody. But but it is a big, well thought out organized entity that you know, as you then start to break it down into each agency and look for opportunities to deploy technology. There's a lot to overcome, to get there.

03:31
All kinds of studies with artificial intelligence. Studies for the federal government, like a study from California is just out there. There's a complicated with funding company called Saba Nava. And he had a study with commercial uses of artificial intelligence. And the three things they said was that 80% of the respondents said it can help streamline their Deed experience. 68% said it would automate processes, and 51% said, it's a better use of data. So whether it's a commercial company in California, a bank in Chicago or a federal agency, it seems like artificial intelligence can have a wide range of impacts, including maybe retention of personnel.

04:08
Yeah, absolutely true. The I also read a study that said that 92% of agency leadership is looking to deploy AI in the next several years. So there's an awareness of the impact that can have and I think the technology is, is has really matured, we are having some success deploying it in several agencies. And I would expect over the next couple of years, we're going to see a broader push for adoption. And it's being championed all across the federal government. So I think it's great.

04:41
We're recording this in September 2022. If there's snow on the ground, and you're listening to this and want to learn more, I suggest you go to the website. It's empowered.ai. When I went there this morning, there's a great article by a gentleman named Dr. Alan badDo. And he talks about some of the practical aspects of artificial intelligence in the federal government. So this is is a great place to start and learn more and more. So Paul,

will you be attending any events here in the next few months? Where can people if they if they see at a booth somewhere, well, how can they grab you?

05:08

Yeah, no, I am, I'm going to be speaking here in October at a banking conference here in DC in Tyson's Corner. And I'll be part of a panel talking about innovation in AI. So I'm excited by that. But certainly, my team and I are out on the on the path quite often trying to get the word out and share. And Dr. Allen meadows, white paper that you referenced is a great example of that. He's a real thought leader in our industry, and has done a great job of getting these messages out.

05:41

Great job. He's a great writer, too, which is unusual in this particular area. So I did some research for this interview. So I went to Google Trends. And I typed in artificial intelligence. Well, guess what, it's been around for a while, then I typed in AI, artificial intelligence as a service. And that's a 10. A little bump while back, but it's really kind of under the radar here. So artificial intelligence is, is something that is been known for a while. But Paul, what you guys did is you put all the chips in the middle of the table, maybe four or five years ago, maybe got together someone like Alan, and all the chips in the middle table said, Nope, this is going to gonna be a game changer. So that's really a strong position to take, isn't it?

06:21

Yeah, we were, you know, we saw the benefit of the technology. So as we were assessing it, we realized that it had huge implications across a suite of programs that we already had. Quite honestly, in hindsight, what we didn't anticipate was sort of resistance to adoption that we have have seen. However, that's, that's shifting. And it's just because it's becoming more more wide known more well written about and more just commercially acceptable, which then as you know, the federal government often lags behind on these types of things, with with commercial entities. So, you know, rpa, machine learning is certainly well entrenched in commercial markets and starting to be really well entrenched. And the other thing that's contributing is just the increased compute power and the cost of it. So that has really contributed to to kind of the acceptance of, of, of these models that we're bringing to the to the market.

07:14

Most of the conversations I have about artificial intelligence kind of begin and end with data. And there's all kinds of catchphrases around data. In fact, you're a lot younger guy than I am back when I was in my early days, the phrase was garbage in garbage out. Okay, what do you expect if you have bad data? And so I think in the sophisticated world of artificial intelligence, I think the sophisticated phrase is quality data in and then quality artificial intelligence. So no matter what agency you're in, no matter what problem you're starting with, it could be with maintaining fuel for jets, it could be with something with NIH, the data is important. And you have to have a tagged and classified before is that right?

07:51

No, that's exactly right. Um, you know, really comes down to each of these agencies having their own discrete data governance policies. And then, you know, what we often say is that you can't have quality AI without quality data. So it is it is the foundation for everything we're doing from a technology perspective, quite honestly.

08:17
So if you start off with biased data, and you have strange results, you point the finger at AI? Well, maybe that's not the problem at all, you know, maybe the problem is maybe in a data structure, and data management. So I think there may be some finger pointing when it comes to AI. And it's an easy target, because the new kid in the block?

08:35
Yeah, I think I think you're exactly right, there's certainly what I've observed at least is that there are challenges. And that often is shows up in the use of the word bias around the algorithms that we deploy, and people wanting to understand what biases are in there. And you have to train these algorithms, obviously, on a tremendous amount of data. And it is important that everybody understand the sources of that data and any inherent biases in it. But I also look at it and think that the fact is, if you were having humans make those decisions, leveraging that same data, one that couldn't look at the volume of data that the AI can put to what how do you feel comfortable that there isn't bias in that human decision? So I think it often is a roadblock that people throw off, it's, you know, we're talking about dramatic change from the way things used to be done. It doesn't mean that you shouldn't be concerned about bias, I absolutely believe you shouldn't, you should understand the sources of data and the algorithms that are written. However, I think, I think what you're going to find over time is that it's going to become less and less of a real concern.

09:36
Well, Ding Ding, ding and radio, they'd say, hey, that's the phrase that pays you and $50 gift certificate to the next commanders game. So I think that the phrase you weren't was was trustworthy. You're trusting the data and unbiased data and, and this is part and parcel of this executive order from 2020. It's trustworthy, talking about privacy. And so it has to be part and parcel of any discussion when it comes to this. This highfalutin artificial intelligence doesn't it?

10:01
Yeah, it really does. I think, you know, as I mentioned, the focus on on, you know, the quality of the data is critically important. And the last thing I would argue is, you've got to focus on the human as well and put human centered design around everything that you're doing, you know, we look at the way we deploy our technologies is, we often have a solution that is human in the loop that we deployed. And what we're really looking to do is present that human with a decision a lot faster than they could get to by pulling in all the data they need to make it, but presenting the recommendation to them and letting them ultimately ultimately decide. So I think having that human centered focus is critically important as well as quality data.

10:41

So Paul, let's talk about humans, many humans have ethical choices and decisions to make. So how has Empower AI address that concern?

10:50
Yeah, one of the first things we did leveraging one of our data scientists down in Richmond was she was very well read on the topic, and she wanted to go and draft up an AI ethical framework and governance model for us. We ultimately documented that we took it to the board for policy approval, which we got. And it's the foundation of many discussions when we go into talk to customers, because it is something that people are keenly aware of, and they want to understand, do we have a view on AI ethical framework? And so we do we have a deep policy on it. And we share that information with

11:26
I have a neighbor who has a Mustang, I think it's like a 400 horsepower Mustang. And, and I have little Mazda Miata 180 horsepower, Mazda or something. And there's different levels of power in different cars, you know, and when I drive to the giant, it's a 25 mile an hour, same thing for the Mustang. And I tell him that all the time. And so but there's different levels of applications and the federal government, there's small agencies, intermediate and bigger agencies, and and maybe the, the Mustang can can handle all that artificial intelligence data, and maybe a little monster can't. And so are there ways for intermediate smaller agencies to take advantage of some of the services you can offer?

12:03
Yeah, there absolutely is. In fact, some of our some of our most prominent customers, where we've deployed our technologies are some of those kind of mid size and smaller agencies, it really comes down it depends on the technology and and where you're deploying it. We have a large program where we've deployed the RPA, and machine learning on the service desk, for one of the largest federal customers you could possibly have that same deployment is really not cost effective in a very small agency with maybe 1000 users. And so you, you wouldn't want to deploy it there. However, there are there are many things that we do, where we're combining hyper automation and machine learning. And quite honestly, it could be a small agency, a small company publicly, or commercially. And certainly at the mid tier, without question, there's, there's challenges that we can help address.

12:59
Your website talks about artificial intelligence, it also talks about artificial intelligence as a service. And so if if, if I was a smaller agency, would I would I talk to you about as a service? Or would I talk about the full blown package? Or is that even a part of the discussion here?

13:17
Yeah, no, the well, quite honestly, the only way we sell it is as a service. So we sell our technologies on just you know, by a bot or by a machine learning algorithm. We sell everything as a service, which is the comprehensive view of the technology, the domain expertise, the configuration of that technology for whatever mission area, we're trying to address, the monitoring and maintenance and ongoing maintenance of that

technology. So all that comes as a single price. And we call it AI as a service, only to simplify, it gets away from having to buy your technology from a product vendor. They have you know, having to have a consultant implemented and maybe a systems integrator maintain it. We eliminate that, that what I think is a perceived risk, right of having to deal with three vendors, you can do it with one.

14:08
I have a friend who believe it or not, he's a distance runner, that's no big saying he's training for a 240 mile race. He does 100 mile tuneups and if He's quite a character, and you got to train, I mean train for years for something like that. And so if we look at years, four or five years, seven years down the road. So how can federal leaders take a look at these executive orders? Take a look at some of the goals of their agency, and what can they do to help embrace AI and some of its promises down the road?

14:40
Yeah, one thing I would recommend John is we we have a solution that is under the umbrella of an AI management system. And I think industry would be wise to look at this technology and look to deploy on anything that's truly enterprise transformation or digital transformation at the enterprise level. because it gives you the ability to look at the agency's priorities to assess how the technologies that are being deployed and they don't have to be in power AI technologies, they can be another third party vendor. But how are those pelotas technologies being deployed, aligned to their objectives? What's the once decided upon to deploy? What's the status of the build? What's what's, how's it behaving? Right. So is it breaking down frequently? Or is there a way to to assess its performance? What's its adoption? And then ultimately, what's its return on investment, and we provide all that in a single portal that allows full transparency to agency leadership to see the impact that they're having as they go down that long AI journey. And I think I would really encourage In fact, if we had an agency talking to us, that that wanted to do truly enterprise work, but didn't want to deploy that that AI management system, I think we'd have to walk away, because I think it's just a failure, and we'll end up coming back, they'll come back to it in the future, because you can't manage all these different projects and make priority decisions without having that kind of holistic view. So I think it's a great solution that really helped them as they go down this journey.

16:16
You know, Paul, you and I both live in the Washington DC area, we've seen a lot of churn in the real estate, I have a new neighbor across the street. So whilst down there yesterday, introduce myself, lo and behold, he works for the NRC Nuclear Regulatory Commission. And he does and I think he used the word Applied Engineering, or he's that term. And it may be if he's got a PhD or something way beyond me, but I liked the like the name applied, and Applied Engineering maybe helps him manage a nuclear facility. Hmm. And what about applied AI? And so when I think of applied AI, I think of this earlier and discussion taught this day is hose of information coming in and trying to adjust it, but but also, it can be a smaller hose, but much more complicated. If we're getting hardware from China, it could have some manufacturers, components that are not trusted. And so I think that might be a role for artificial intelligence being able to dive deeper. So you have a wide set there, but I'll take a narrower set and dive deeper into it. Is that one of the applications for AI?

17:20

Yeah, there without question, you know, the whole supply chain is wide open, I think from an AI perspective, and truly understanding both not just the companies that you're you're purchasing from, but who their suppliers are. And there's companies out there that are wonderful technologies, and we've partnered with them, that that can help solve that problem. But also, when you think about applied AI, I step back and I just think about what we're doing for many of our customers. And even for our employees, which is coming up with those those truly day to day challenges that you have, right as a silly example, in our company, everybody wants to know what their PTO balances, and you have to log into Deltec to find out. So we have on all of our employees, desktops, a solution that you can just click a button, it logs in, it goes and pulls the data, and it presents it to you. But it does it in a fraction of a second as opposed to the time it would take for an employee to go do that, which if they're working, you know, there could be connectivity problems and all these other things. It's already there for him. And and it's a it's a it's a really minor example. But a very basic example. It says if you just think about a DD 2875 form, which which the DoD uses to every time they have a relocation, it is a very comprehensive, comprehensive form. It's got lots of requirements to get processed. And we can review it in advance before it gets submitted to ensure that signatures are there that certifications are dated that dental records are attached if necessary. All the things that slow the DoD down in deploying, we can help them with that. This is just another basic example. There's there's literally hundreds,

19:05

when I think of the DoD supply chain, I do think of telecommunications equipment from China, it says Mitel brain is stuck on that, I think of those chips, and I said Long Beach last year, and it had products in there and good and bad products. But I think if we expand our horizons, I think the supply chain can also apply it to software itself. And so it's one thing to have a discrete number of routers and inspect them. But if you have code that's pulled in from library here, library there and then this and that and and try to understand the origins of all the in the implications of different coding come together. I don't know how else a human can understand it. Let's use artificial, it's too complex.

19:46

It is not just a foundationally. Everything we do is developed by US citizens in the US. So we use we do no offshoring of our development teams. And it's been something we've been proud about since we first came to market with AI is that it's it is it is USA empowered AI. It's not. It's not foreign developed. So but I agree with everything you're saying I do think there's a huge application for AI. And in that field,

20:11

I think there's applications for fraud fraud detection. I mean, if you look at what the United States is doing in the next few years, the amount of back with just the infrastructure billion dollars right there. Now, do you think there's opportunities for fraud within that deployment, I mean, and that's just too, it's too, almost too much. And there's time constraints on this. In fact, the next six months are some systems that have to be deployed, maybe quicker than would be prudent. And so all of a sudden, we have these pressures in the federal government to do things quickly. And at the same time, monitor them and account for fraud and waste. And it's too it's the quote, we started with too much data, not enough people can understand it could be fraud, could be software, it could be hardware could be systems, for the DOD, it's just too much.

20:58
No, you're absolutely right. We've actually used it in support of fraud, waste, and abuse for one of our healthcare customers. Perfect, really large scale, you know, volumes. And and it's it's, it's a great application of the technology that can help you sift through literally petabytes and petabytes of data, and identify, you know, those areas where you really need to do some digging and send investigative teams in.

21:23
Well, earlier in our discussion, you said that you put all the chips in for AI a few years back. So you obviously had pretty good prescients back then. So let's look in the crystal ball look 510 years down the road. So where do you see this whole thing headed? major obstacles? Are there going to be limitations? Where do we think it's headed?

21:44
Yeah, well, I think, jumping ahead, I'd say 10 years out, it's going to be a different world. But but I'll break it down into kind of little segments, I think one to three years, we're going to continue to see those forward leaning agencies drive adoption of, of the technologies that we have, and are out there available in industry, the challenges that that they're going to face is going to come down to simple things like ATMs, the authorization operator, so getting at POS for the technologies, we have them in our customers, in four different customers today. It's a real challenge. And it's it takes much longer than it should. And what we also need to see, and this would probably fall into that next bucket of three to five years is a willingness on the government to accept reciprocity. So if you've, if you've deployed your technology, let's just say in the army, then then you're now talking to a navy customer. We've got to get reciprocity between between those two entities so that, you know, we're not doing the same work over and over again, and they can get the benefit of of the technologies in that three to five year window. I think there'll be even a greater focus on some of the more advanced AI with focus on things like interoperability, and the warfighter. Right. So I think there's an opportunity from an interoperability perspective, we tried to solve it with systems assistance and other things with quite honestly, I can resolve that for you. And then and then there are many applications that can assist that warfighter that I think we'll see more and more of, and then when you step back and look at that five to 10 year window that you kind of defined, I think it kind of it's going to come down to human human integration with the AI, right, and the best way to do that. And, you know, I mentioned early in the conversation, the human centered design aspects of it, but really to the point where the AI and human are trusted, and they're working side by side as a twin is really where I think you're gonna get ultimate benefit. And that's probably in that five to 10 year window.

23:50
I'm involved in the university community here in Washington, DC, and not many AI majors. I think if you went to Virginia Tech, same thing, MIT same thing, Carnegie Mellon, maybe some there. So from your perspective, how do you recruit folks? I mean, how do you get good people? Do you just reassign skill sets? Or? I think this is a challenge to is, is should university should private firms, National Laboratories, I mean, who's gonna responsible for creating data scientists who have the analytic ability to help you out help agencies?

24:25
Yeah, it's a good, it's a good question. And I, you know, there's many avenues to do it. I do. There are some AI degrees out there now, many around that whole software development, software engineering kind of side of the house. We've partnered with Mercyhurst University. And so we've had interns working on AI r&d from Mercyhurst. For the last 18 months on some new technologies, were getting ready to come to market. And it's really giving us an avenue for access to future future technology. Or I should say, technologists, as well as it's given And then great internships to really learn some advanced technologies that we are deploying, and they've done a great job helping us, we've also gone and recruited at some some of the universities where, you know, out of their honors program from an engineering perspective, and it's awful often on software engineering side and software development side. And then quite honestly, just, you know, in the typical ways when, when, when you recruit, what I have found, and we have a really nice culture here is when we, when we bring people in, you know, in sending them to bring other people in, and what we've had his packs of engineers come to us, in locations, discrete locations, where we hired one, and next thing, you know, a friend came or another former colleague came, and then, and then we end up with mass. And I think that's really been, I think, it says a lot about the management style and the culture that we have in the business, that they're willing to refer people. But more importantly, the technology that we're working with is advanced. And so these younger engineers are excited to come and play with the technology. And it's certainly a lot more than playing. But you know, what I mean, where they're getting their hands on practically, with the technology on a day to day basis. And I think that's, that sells itself.

26:13
I think that's what I found with my students, too, is that it's one thing to have a warm and inviting atmosphere, but it's only half the it has to be something that is above and beyond something intriguing, all of a sudden, then you get the bright minds that migrate over to the intriguing problem solving. And then our government listeners get the benefit from it. And it's so difficult and so hard and, and I don't I can't use the word petabyte earlier. What is that going to be an old fashioned term and two years people? Oh, yeah, that's just a petabyte. Don't even worry about that anymore, do we? Well, this has been a great conversation. I hope our listeners have a better understanding of what artificial intelligence is how can help federal agencies, artificial intelligence as a service and maybe some insight into the company empowered.ai You've been listening to the fiddle tech podcast with John Gilroy. I'd like to thank my guest, Paul delay president and CEO at Empower AI Thanks, John.