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Dominic:	00:00	The exploring AI in government podcast is brought to you by Accenture federal services and produced by Government Executive Media Group's Studio2G. Accenture Federal Services combines the power of artificial intelligence, automation, and advanced analytics with deep client industry and technology expertise to help agencies re-imagine how they achieve their mission, serve citizens, and manage their organization. Learn what applied intelligence can do for your agency at accenture.com/federal AI
Dominic:	00:36	Hello and welcome to another edition of exploring AI in government, a podcast series dedicated to interviewing leading global minds in the artificial intelligence ecosystem and getting at the insights that drive adoption across key industries and the federal government. I'm your host Dominic Delmolino, chief technology officer for Accenture Federal Services. As the technology is poised to dramatically impact nearly all of its systems and operations, it should be no surprise that the US military use an AI-ready workforce as a strategic priority. What makes their challenge especially daunting is the unique structure of its workforce with both enlisted and civilian members. As a result, we are seeing them embrace a number of strategies to prepare the workforce for artificial intelligence.
Kathleen:	01:16	Given the impact of this topic, we're excited to welcome captain Michael Kanaan to the podcast. He is the US air force enterprise lead for artificial intelligence and co-chair of the US Air Forces' cross-functional team on artificial intelligence. In this capacity, he is responsible for offering the air forces' artificial intelligence strategies, guiding integration plans and synchronizing efforts of the total force enterprise. Welcome to the show, Michael, and thank you for joining us today.
Michael Kanaan:	01:53	Hello. Thanks. It's good to be with both of you. As always.
Kathleen:	01:56	I know that I gave a quick background about you, but we'd like it if you could introduce yourself to our listeners as well.
Michael Kanaan:	02:02	Sure. And I think you did define it well in that responsibility. So we look at AI as a ubiquitous technology, which necessitates that we look across the entirety of the force. People forget quite often that the same jobs you have in the private sector, we have the same jobs in the air force and we do the same things. So I'm responsible for co-chairing alongside our chief information office and F-WIC which is characterizing our portfolio in an envisioning our

future with the air force. Looking at AI cross-functionally, as a cross-functional team, representing 26 members. And it's that terrific team of innovators I guess you could call it sort of a groundswell movement across the air force. You hear all sorts of things lately, innovative, a-f for Air Force of course. And that helps drive what we're going to talk about today.

Dominic:	03:52	So Mike, given the scope of that work, how important is getting artificial intelligence right? For the air force and what does right even look like to you?

Michael Kanaan:	03:59	I think that's existential, right? That's the, that's where we're at here. And I don't mean existential in some doomsday way. I mean in the sense that it's about relevance. That's what we're talking about. Not only on the global stage, but to our airmen, to our country, and being able to lead the topics of our time, like AI to drive us forward as a nation together. And that starts with people. So what does right look like? I think the first step is to drive back any disillusionment that this about replacing people or not being thoughtful in our actions, with the technology. I want people to be excited about AI, realizing that it will augment them not to be fearful of some dystopian future. And for the air force, it's at these critical moments that are primarily driven by technological change. We call them inflection points. And those that use the technologies best gained comparative and strategic advantage. And that goes for military government and business alike in the private sector. So we've seen this before. This is just another example of the Stirrup, the rolling rifle, the plane, the Internet. And, and we've done this before and we'll do it again, with AI.

Dominic:	05:10	So Mike, you're working to develop the air forces' artificial intelligence strategy. What are some of the key elements and focus areas for that strategy?

Michael Kanaan:	05:17	When we wrote that strategy, we took a page from Ray Dahlia's principles so that we could continuously have a transparent conversation while the world around us changed. So I'm happy to share some of those principles and maybe some pithy points about each of them. And the first is driving down technological barriers to entry. I like the tagline: Unclassified does not mean unsecure. It's a wholly different conversation and we have to take back risk that the private sector, non-traditionals, or anyone in business has working with us. So we don't create unique solutions that are tailored only to us. The worst thing you can do as an organization is be the sole developer and consumer of

a technology that's wildly expensive. The second one, and it sounds a little bit pedantic or like a tagline, but treating data as a strategic asset. But if we did that, I think you'd see things a little bit differently. We used to say back in the day or not even that long ago, when a tree falls in forest, does it make a noise? Well, of course it does. In 2019 the question is, was there something there to measure it? So we have to look at what we do best and digitize our workflows. And if you treat a data as strategic asset, you would do as such. The third is democratizing access to AI technologies. Think about the millions of available algorithms developed because of the private sector. And the world is looked at as the due obligation to put these into the public sector. And that's the right thing to do. We should be able to onboard many of these to fix the minutiae of our lives, the difficult parts and make things better and not pay down on that or develop them ourselves, but utilize what the world's developed. The fourth, which I think we'll talk about in a minute, is upskilling and valuing our workforce. It's really important about providing them the contemporary education models they deserve. And then lastly, it's having a transparent, open conversation about the ethical, moral, legal use cases of artificial intelligence and making sure we're building and our value proposition for human dignity in that.

Dominic:	07:31	Sounds really good. So can you give us a check point? How far along are you on some of these and where are you hoping to maybe pick up the pace?

Michael Kanaan:	07:38	Right now, I think my favorite line is we're hacking the bureaucracy. Bureaucracy exists for a good reason. It's meant to measure execution. It's meant to have due diligence on things. And you know, some people will rail against the acquisition system or say we move too slow. But in order to hack the system, you have to understand the system. So I think over the course of, you know, the next year and a half what we're going to do is start providing the tools that I talked about driving down technological barriers to entry to build agility, empower and unleash our workforce. So the first are seemingly mundane tactical steps. They're not always the most sexy thing that you're going to work on, but you're going to get there. And it's infrastructure, data and software. So the environment's open to experiment, to fail forward. You can't get to a new place if you don't do new things. And what we want to do is empower people in their creative minds to find insights that they could have never found before. And that's through pragmatic approaches of delivering the ecosystem for it. Because without any of these underlying pieces, you're not

going to get there anyways or it will be too costly or expensive or not really representative of you who you are. AI Is a journey, always a chicken and the egg problem. Where do I start? Is the toughest question that people ask. Things have to happen in parallel. So I had mentioned people, infrastructure, data, software, business processes, and then the ethical conversations, which is why it's so simultaneously important for that progress that leadership is committed as a whole in an organization to move forward. I think you see that in the air force with our actions reflecting our words.

Kathleen:	09:26	Yeah. You know, that's great that you bring up a journey. And I think that you've really outlined a roadmap of what you, you as, the air force and government agencies in general need to think about and consider. So how, how do you engage with the JAC, the joint AI center and how has this relationship been to date? I know maybe explain very quickly for some of our listeners who may not be familiar with the JAC and what they do and then how you play a part with that.
Michael Kanaan:	09:50	The JAC, the joint AI center is probably one of the most exciting things that's happened in the department of defense in in a while. And in my mind it's been terrific. They lead a number of national mission initiatives that are of value to the Department of Defense and help bridge the gap between industry and the DoD right now. So between the missions for the air force of humanitarian aid and their advocacy of AI, it's been exciting for our existence as we also struggle forward on this pass. Most fundamentally, it's been about the joint common foundation so that we can do things that are best or uniquely suited to the United States air force, while simultaneously also knowing that we can complement and share those insights together. Look, AI gets better as you share more and you have readable data and if you do that, you kind of live in this ever-virtuous cycle back and forth because computers see the world through rows and columns. And if we can share those and layer them on top of each other, we get insights we wouldn't have had before. New Strategies emerge. But they're helping with the basics and that's what's most critical right now. So we can get to a place where we're sharing in a more meaningful manner.
Dominic:	11:02	So Mike, given its unique mission, the air force has always sought a very highly technical workforce. So how would you describe kind of the history of how that workforce strategy has evolved? How are you changing that now and how would you describe the airman of the future?

Michael Kanaan:	11:16	Unequivocally, uh it is an organization with the greatest technical experts in the world. We've demonstrated that time and time again. Whether it's the top of our leadership chain that have, that have continually answered our nation's call on every single thing we've asked of them, or that's a 19-year-old airman right now on the line serving someone in any frame of business. I had mentioned earlier that remember the air force does everything that you do as well as a civilian. So whether that's in business or that's finance, personnel, intelligence, surveillance and reconnaissance that people think about when we're watching our full motion video streams from across the globe whether that's piloting an aircraft building a flight plan, maintaining you know, the world's most technologically advanced airplanes in the world. They are unequivocal unequivocally experts in their domains and we continue to seek to retain and build those. Now we're looking at the digital technologies of our future. And we'll do the exact same thing with those because it's at our history. It's at the core of our business model, essentially an organization that came from a garage of bicycle mechanics that dreamt to fly. So I think that right now we're doing the same and the new domains of the future, like cyberspace and, and space to see this into existence.
Kathleen:	12:35	So how is AI Changing this paradigm?
Michael Kanaan:	12:37	I would think that AI is changing the paradigm of flipping things upside down. We used to try to depict the end state and now the first thing that I ask is, well, tell me about what I have first and let AI start to illuminate insights. I would have never seen, we're not talking about having AI make decisions, we're talking about illuminating new strategies. And then for us to then look at that and say, well, is that reasonable? Does that pattern make sense? And does that change my core business process?
Kathleen:	13:06	As technologies continue to advance and you're looking to bring AI technologies in, this workforce is going to change. So how do you see the airmen of the future?
Michael Kanaan:	13:17	I think it starts with this recognition that the future is here and it's now that's number one. I always liked the statistic because not a lot of people share it or they forget it exists. 88% of the United States air force are millennials, you know, #adultsunder40. But they're digital natives in nature. They're thoughtful. They question the status quo. They're SCIFI writers, they're inspired, they're from diverse backgrounds. They speak various languages, right, between technology and between your, everyday life.

They're young and they believe in community and togetherness. There are all the things we have now and they're all the things that we'll have uh, in the future. But when I described that airman of the future, we try to, I just want the airman to the future to have some agility. We maybe don't have that agility right now because we said this is the airman of the future. Who would have thought, you know, in 2010 that you'd have the phone that you have today, right? The change in the world drove the development of the phone. So what I hope is that we let them define themselves and become the stories of tomorrow today.

Kathleen:	14:25	Yeah, that's great. You know, because it's sometimes it's hard to see exactly what type of roles and skills you're going to need in the future cause we're not there yet. So we don't know exactly how things are changing. But make sure that you're open to it. You're constantly thinking about it. It sounds like you are. Following up with that, if we are going to bring AI into the air force, what kind of skills do these new airmen need in order to be an AI literate workforce?
Michael Kanaan:	14:50	I think there's a level of technological appreciation that we're talking about here. There are certainly no thought process that we're trying to message that every airman should be a hacker. We should understand how does that process take place and have appreciation for what needs to come and what needs to be provided. Now, certainly we're gonna have all of those talented airmen and we already do right now. But I think it's building and just technological appreciation and empowering those. I liken it to the idea, the ideas of the new teamed with the techniques of the old. That seems to work out well. And I think we're taking the shift in the Air Force pretty demonstrably on that.
Kathleen:	15:31	You mentioned that a large majority of the air force is millennials and they're multilingual, but that doesn't necessarily mean that they speak more than one foreign language. They could speak computer languages as well. And I know that you've been very vocal in your belief that computer languages should be treated equivalent to human foreign languages. And you've recently launched the air force computer language initiative. Can you tell us a little bit about that program?
Michael Kanaan:	15:54	Ah, yes, very vocal on this because I I believe in this deeply all right. As a global enterprise, the Department of Defense has a long history of recognizing the critical and

significance value that employees, those airmen that we're talking about. Also big 'A' airmen. All airmans: civilian, contractors, everyone alike who have secondary non-English language proficiencies. Historically and continually, we seek to attract retain them who have two things. One Who have an evident aptitude to learn foreign languages or to have existing foreign language fluencies. We offer them through what's called the defense language aptitude battery or the d-lab to measure their linguistic aptitude. And then those who pass with scoring grades are provided opportunities they may not have otherwise had. Uh similarly the defense language proficiency test or the DLPT is offered to measure an individual's existing fluency in a foreign language. Those who pass with certain scores qualify for certain duty assignments where we deem that as mission critical. They also received something called foreign language proficiency pay commensurate with that language and their level of fluency if, if that's a strategic need. Currently, however, none of the testing or incentivize programs outlined here uh measure or award, individuals who have proficiency or fluency in any computer-based language. And I think we need to correct that hold over from an earlier analog age. That's what we're doing now. So it's kinda like same, same yet different. It's meant to be underneath the language model. Just tailored a little bit for computer languages, which are inherently what we consider constrained languages versus human language, which is unconstrained.

Kathleen:	17:37	The air force has a really diverse workforce, you know, enlisted airmen. It has civilian employees and contractors as well. So there's a lot of different people coming into play here. How do you maximize this talent given their unique career paths?
Michael Kanaan:	17:50	Could you imagine any job that you did today without your phone or computer? Programming and digital is, is you ubiquitous to every single job. So I, I think if they have a passion, they should deserve an opportunity in whatever sphere that they work to, to make it their own, to solve their own problems, to be empowered at the edge. And if also, if they don't like that sphere in which they work, then they should be given the opportunity for those who speak the operative languages of our time to fit into anything else. Ultimately, people are the greatest asset for the air force. And they're not overhead. Salaries are overhead. Humans are not overhead - It's what we do with them. The people build our systems and it's not the things we buy. Now of course, what we buy matters. But it's what we do with the things that we buy so that people at the edge are autonomous. They are decision makers. And in order to do

so, we have to pay attention to the underlying foundation that you can use any of these languages in any type of job. So I, you know, it's hard for us to break away sometimes of, are we talking about warfighting operations or are we talking about the things just to make our airman's lives better like finance or, making sure that their healthcare is in place? These are all related to digital technologies and using artificial intelligence.

Kathleen:	19:13	So compared with other aspects of the government, the air force is younger. How does this impact your strategy?
Michael Kanaan:	19:20	Inner Service rivalry. That's what we're talking about here, right? And it's important, this is something that we celebrated and do celebrate in the industrial age. So in the industrial age, we used to have trade-offs: better, faster, cheaper. In the industrial age, you get two of those trade-offs. Well in the digital age, you can do all three and, and people don't realize that shift has occurred. Now between those services, one would do something perhaps faster and cheaper and the other would do something better. So we would fill voids and move forward together. But I think what we're realizing now is that there are new visions of sharing in this digital age back to, you know, these are inherently ones and zeros what we're talking about here. So we used to make trade-offs and now the biggest impact of this strategy is we're not operating in our own vacuum. We're operating with communicating with the other services 'cause I think the whole world looks completely different than it did before.
Kathleen:	20:21	You know, as we continue to change, technology's evolving. It's a big part of the air force, a big part of people's lives. What's the right balance between active agency led re-skilling and user driven continuous learning?
Michael Kanaan:	20:34	Yes. I mean both, right? Which is pretty cool. So part of this is of course, that where you're going to place value on this. I'm going, you know, the traditional vision of, Oh, I'm going to direct you to learn this, but also we want to tap into people's passion. The civilian coder, right? Bitcoin miners at home are those who like playing Minecraft and all sorts of other games. Or just like massive multiplayer games, right? So if you have that passion, you have an opportunity and if you're curious, you're also provided. So I think we need to be equal to provide incentives to do this for the workforce, but also the contemporary education that our workforce across the entirety of government deserves by joining our force. And make sure that they can access it both now and in the future if they want. I think about this a

lot because most recently we were in Washington DC for, for the anniversary of the Apollo mission, right? 50Th anniversary. Pretty cool. What a lot of people forget about that was that in 1958 simultaneously occurring with Sputnik moment when we realized we were a little behind before we had a complete bipartisan move. Government operated a new way, realizing that we have to do something a little bit differently with our youth. They created the National Defense Education Act. So at a time when, you know, America had home-Ec classes and life was just different and they placed value on things like engineering, electrical engineering aeronautical engineering and all these other pieces. I think we're standing at a time like that again, where we realize that something has changed and now we have to do something about it. And it's, it's through these efforts that I hope we get there.

Kathleen:	22:26	It's often said that AI will require workers to embrace more humanistic skills like empathy. Is this true even for the Air Force?
Michael Kanaan:	22:35	I spoke with an airman the other day and she said something pretty profound that I think you can extend to, to life and technology. She said it's trying to feel relevant in a world where you're replaceable. We don't want people to feel that way. This is not what AI is all about. This about augmenting and doing better. People often ask, you know, are you going to replace me with artificial intelligence? No, we're going to make you better. We're going to help you get rid of the things that you probably shouldn't be doing as a human anyways. And then as we move forward, I think what's interesting in, in the sphere of programming coding is that you're seeing languages become less constrained, that you're interacting with your machines a little bit more, that there's space to have not be so prescriptive. And I think we're only driving further to that place. So SCIFI writers are going to be important. People in ethics are going to be huge. Philosophy is going to matter. Cause I think that the current state of machine learning will profoundly impacts society. So we don't only focus on the engineering skills, but we wanna celebrate the arts as well of like steam instead of stem. Right.
Dominic:	23:47	For sure. So, you know, you've gotten a really good perspective talking to the airman, seeing what you've seen in the industry. So, so Mike, I'm curious, what's the most exciting thing you're seeing in artificial intelligence today?
Michael Kanaan:	23:57	Every day is exciting. It's hard to keep up some days. I think games, games are what's most exciting and

throughout the history of artificial intelligence, games kind of stand at a pillar. And there's a reason throughout the history of, of our society, games represent the best of us, our greatest minds, our greatest stories played games, and they're the best. It's usually a hallmark of genius for games that have stood the test of time. While we had chess, we had Gho, and now we have the digital games, which add a level of, of interaction and, and response and, and kind of like the fog of war and all the things that life consists of and responding in kind very timely, right, with immediate actions. So everything happened in reinforcement learning, I find fascinating with DOTA, with starcraft and deep mind. I think that's pretty cool. And I think that machine learning and these kind of more precise techniques with reinforcement learning is really an interesting endeavor we're about to enter into. And then you're slowly seeing a lot more AI just integrate into every life pieces. I wonder one day when I can just go home and make sure I stay on my my caloric or diet plan because a robot in the kitchen is making me food.

Dominic:	25:17	Well that sounds like a fun thing. What, what would be your biggest misperception surrounding artificial intelligence that you'd like to maybe help people understand or clear up?
Michael Kanaan:	25:26	We are not replacing people. Any organization that starts with driving down costs or replacing people I think is creating an environment for a lot of perverse behaviors or rewards that they're going to, you know, inculcate within the organization. This is about doing things better. This is about serving your customer better. This about taking care of your employees better. All of those other things will come in due time, naturally. The other pieces, where do people start this one? I always look at, start with your subject matter experts. Start with your best. Do everything that you can to use the current state of machine learning and AI to take away and automate the aspects of their lives they don't need to be doing so they can do what they do best, better. And a lot of people want to start at the bottom, you know, start at the top. This isn't Drake right now.
Dominic:	26:22	So given the rapid pace of AI evolution and AI technology, do you think government in particular the military, do you think they can keep pace?
Michael Kanaan:	26:30	Um it's about the principles that I mentioned before that create an environment where we can keep pace, that we can move with the agility I spoke to. But I want to talk a little bit about us leading this conversation. The Sh, I mean,

you think about uh companies and various, they have a fiduciary responsibility to their shareholders, right? We, we respond, we pay attention to driving profits, the fiduciary responsibility of the United States Air Force, Department of Defenses, everyone to every citizen. So I would like to see that we're a part of this conversation. And we're leading it. You know, I will be honest, I think truthfully that it's, it's patently absurd that to believe that a representative government, you know, that should not be trusted, therefore should not have artificial intelligence. I think it's time to reinvigorate the triangular relationship between academia, industry and the government, particularly on this topic. Because what we're talking about here is ensuring our vision of human dignities our vision of freedom moving forward, which is, is at stake in some regards.

Dominic:	27:39	So Mike, what, what does that vision look like for artificial intelligence in the air force? What's next for AI in the Air Force?
Michael Kanaan:	27:44	A whole lot. The computer language initiative, which is very exciting. I can, I can tell you just in the self-assessment process of airmen, just raising their hand saying, I know these languages, I do this action with these languages or this is the purpose that I serve and I think I know it, you know, this well over 2,700 of them came out and self-identified and, and we're only growing that, that marketing campaign. So moving forward on the testing aspects of it, which is kind of an interesting academic conversation to have and an exercise to go through. What does it mean to be proficient? What does it mean to have an aptitude to learn computer languages? There's a study from not too long ago that when you're learning a human foreign language, there's five areas of your brain that, that are stimulated. And with computer languages, they're three of those same areas. So this is pretty cool to move forward together on access to contemporary education. That's a big one. So, so if you want to learn, you can go learn. The MIT AI accelerator with the air force. So we just recently announced three months ago, the Massachusetts Institute of Technology at sea sail on the biggest AI labs in the world. They have relationship with the United States air force and which right now we are down selecting 10 of those flagship vanguard programs to work on. And that should be coming up soon. But we're moving airman there as we speak to be embedded with, you know, the world's best researchers that take pictures of black holes. The air force spark tank is coming up. Think Shark tank. This'll be the third annual that happens in Orlando every single year. So it's so it's empowering people to have their innovative ideas and be heard and do something about it. But

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ultimately it's the baby steps that make our lives better and creating a foundation and ecosystem to do as such.

Kathleen:	29:33	You know, that's really great that you're really making an effort to get uh airmen of all different levels involved in this, that you really see the strategic advantage of this and how you can get the workforce to really be behind this. And so the initiatives that you have coming up are really great. We'll definitely be keeping an eye on that. So thank you so much for joining us on this podcast. For our listeners that want to follow up with you and learn more about your work, how can they best engage with you?
Michael Kanaan:	29:58	Well, I'm pretty active on Twitter and LinkedIn. So @MichaelJKanaan - I think we're in a new era of transparency and I love dialoguing and people in this sphere, again, that huge team that we have love dialoguing too because we view it as friction makes traction. And that starts with communicating in new ways about this topic and, and paying attention to the hard questions we have to, to answer for. It's a whole of nation focus that I hope is where we get. So having public transparent dialogue is new. And we want to talk about keeping the values that we have as a Western society 'cause this will matter in the days to come and we should probably move forward in a concerted together way than we would otherwise.
Kathleen:	30:44	Okay, great. Thanks so much.
Michael Kanaan:	30:46	Thanks.
Dominic:	30:48	Captain Mike. Canaan underscored the need to take a long-term perspective. We not only want to prepare the workforce for a human plus machine world, but we also need to ensure that their skills remain relevant throughout their career.
Kathleen:	30:58	Mike has long been one of the key visionaries in federal AI. He understands the magnitude of the challenges facing the air force. His mix of boldness and pragmatism feels like the right approach for moving a large complex organization forward. Quickly.
Dominic:	31:14	Thanks again for listening. If you've liked what you heard, tell a friend or share socially using the hashtag: explore AI.
Dominic:	31:30	Thank you for listening to exploring AI in government brought to you by Accenture Federal Services. To continue the conversation, visit us at accenture.com/exploreAI

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