GLOBAL & NATIONAL SECURITY INSTITUTE

TAMPA SUMMIT

GNSI TAMPA SUMMIT 3

Featuring the 9th Great Power Competition Conference

ARTIFICIAL INTELLIGENCE IN THE ERA OF STRATEGIC COMPETITION

SUMMIT REPORT


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The 4-Star Review

Insights and observations from General McKenzie, who served from 2019 - 2022 as Commander of United States Central Command (USCENTCOM)

GNSI Tampa Summit 3: Artificial Intelligence in the Era of Strategic Competition served as a natural extension of our previous summit, which focused on uncrewed and autonomous warfare. At GNSI Tampa Summit 2, we learned that the gathering, processing, and efficient use of information will be a dominant factor in any future conflict. In this latest Summit, as you'll read in this report, we learned the processing and manipulation of vast amounts of information in a very short time frame is the primary strength of artificial intelligence, as well as its capability to evaluate that information in the context of its environment and other sensory data.

General (Ret) Frank McKenzie, Executive Director, GNSI

We heard many experts tell us the hype surrounding artificial intelligence is currently superheated, and there is a gap between the hype and reality. I think we're wise to be excited about the future of AI while still understanding its current limitations.

To paraphrase something former Secretary of Homeland Security Kirstjen Nielsen said during *GNSI Tampa Summit 3:* We see something that uses a thinking process and want to believe it is, in fact, thinking. But that's not necessarily true.

That distinction is important. As a leader, I want AI to gather all the available information, evaluate it and provide me with quantifiable data in the form of an understandable and actionable reference frame upon which I can build a decision. I would seek help from AI for such quantitative decisions; I would not seek help with a qualitative or subjective decision. My former mentor, General Jim Mattis, gave me some great advice once: with any problem, you want to solve as much as possible quantitatively, as that will reduce the amount you have to solve qualitatively, or subjectively. Those qualitative decisions are still the province of humans, in my mind.

Modern, advanced weapon systems, frequently uncrewed and (sometimes) autonomous, are becoming far more prevalent on the battlefield. We also know artificial intelligence is a vital component in those systems. But, in this latest Summit, we found out that while AI can be an enormously helpful tool, the closer it gets to conflict the more dangerous it becomes as the tool itself will come under attack from opposing forces that are aggressively trying to break it.

Nevertheless, artificial intelligence has been a force multiplier in many areas and its potential in other areas remains almost limitless, especially if you apply it to cybersecurity and cyberwarfare. Cyber is now considered the fifth of the five battle domains: air, sea, land, space and cyber. Russian President Vladimir Putin is quoted as saying, "The one who becomes the leader in this sphere (AI) will be the ruler of the world." I think he's wrong. AI is a subcomponent of cyber, I believe, and that quote should really state: "The one who becomes the leader in cyber will be the ruler of the world." We often think of outer space as being limitless, but I would argue the cyber realm is also without limits. We know and understand far more about space than we do about cyber.

The effects of cyber operations can be seen in Ukraine and Gaza today. We haven't yet established what deterrence in cyber really is. We're still struggling to understand how cyber effects can best be marshaled alongside other, more traditional, effects of warfare.

May 1, 2024

Artificial Intelligence in the Era of Strategic Competition

9th Great Power Competition (GPC) Conference March 5-7, 2024

Introduction

The 3rd Tampa Summit: *Artificial Intelligence in the Era of Strategic Competition* was held March 5-7th, 2024 at the University of South Florida and encompassed the 9th event in the Great Power Competition Conference series. The Global and National Security Institute (GNSI), in partnership with U.S. Central Command (USCENTCOM), the U.S. Department of Defense Chief Digital and Artificial Intelligence Office (CDAO), and the USF Institute for Artificial Intelligence (AI+X) brought together over 50 experts from government, academia and private industry to discuss the current and future applications of artificial intelligence in national security.

Artificial Intelligence Arms Race: AI and Great Power Competition

In the current environment policymakers and industry leaders "can barely even have a conversation without AI coming up, without some type of headline where artificial intelligence is involved," as Alexandra Seymour stated. In his keynote address, Vice Admiral Brad Cooper opened the summit with the acknowledgment that "AI transforms the very nature of great power competition, conflict, and in fact, international cooperation in new and meaningful ways." He referenced geopolitical dynamics with China, Russia, and Iran, to illustrate the strategic competition leveraging AI technologies. "China, Russia, and Iran are using AI in the CENTCOM area of responsibility to compete strategically and that is to compete with us for influence and their advantage." As AI capabilities increase, John Bansemer warned "we should expect nations to try and use it for competitive advantage." Maintaining a competitive edge will require collaborative efforts to face AI challenges globally, particularly in maintaining a rules-based international order amidst disruptive AI technologies employed by adversaries" General Bryan Fenton advised.

Technological Development in Strategic Competition

Acknowledging the vital role of AI in maintaining a competitive edge in the military domain, Vice Admiral Cooper emphasized the rapid development and application of AI technologies in response to global threats. He highlighted the collaboration with partners to enhance capabilities, stating, "we're able to move at speeds that were previously unimaginable," emphasizing the dynamic evolution of military strategies influenced by AI advancements. Peter Yu pointed out the difficult balance between how much "we need to make sure that we got the proper permission with how much we can actually increase our competitive edge and to develop the strongest technology possible."

Sharon Daniels, noted "to be in competition, you have to be better, faster, more accurate, consistent, all the benefits that this type of technology can bring to the world. So it's [AI] moving fast, faster than ever." AI technology is rapidly developing and is in part what is currently driving progress in AI is computing "large amounts of semiconductors and specifically GPUs are allowing us to train larger and larger models that are far more capable than we've ever seen," John Bansemer pointed out. Additionally, John Turner from the CDAO emphasized the core inputs necessary for AI innovation—data, algorithms, talent, and compute—as critical to maintaining competitiveness. Turner further stressed the importance of understanding AI, not just as a standalone technology, but as a general-purpose technology, like electricity that enhances various military capabilities. "It's really important that we think about AI not as a thing that is delivered, but rather as a general-purpose technology that enables our systems and our capabilities to operate more effectively."

Part of competing with other great powers, such as China and Russia, is not only the application of AI but developing the technology associated with artificial intelligence. Julian Mueller-Kaler critiqued the current U.S. policy on AI technology development, suggesting it might inadvertently strengthen adversaries by forcing them to develop their own capabilities. "The current approach of the United States, particularly with regards to China, is to restrict access to computing power. And the way that you do this is through Chips Act and other sorts of policies that basically try to prevent Chinese from buying and purchasing chips" He further warned of the risks associated with diverging international standards on AI, saying, "This approach...runs the risk of basically creating the very resilience that you're trying to prevent."

AI and the People's Republic of China

China as an adversary and competitor in the realm of artificial intelligence was remarked upon throughout the

Summit. The Honorable Kathleen Hicks, Deputy Secretary of Defense spoke to the geopolitical landscape, highlighting the competition with the People's Republic of China (PRC) as a driving force behind AI and technology advancement. She noted, "the advantage will always go to the country that uses AI and associated technologies better, faster, smarter, and safer," pointing out the critical role of AI in maintaining national security and global leadership. Hicks further underscored the strategic imperative of AI in maintaining a competitive edge, particularly against the PRC. She explained, "our task in DOD is to adopt the innovations wherever they add the most military value," highlighting the critical role of AI in strengthening the U.S. military's decision-making processes and operational effectiveness. General Bryan Fenton in his role as SOCOM Commander has "watched the PRC use AI to augment cyber-attacks, support economic espionage and assist in the development of what they call system destruction warfare where their goal is to destroy weak points and ours and partner in ally systems across domains with targets such as network connections and satellites and logistical supply systems."

Discussions continued the imperative of achieving a competitive edge in the context of international rivalry with powers like the PRC. John Shanahan bluntly stated, "we are in a competition with China on AI if not a confrontation at times." Former Security of Homeland Security Kirstjen Nielsen also brought up concerns about China's aggressive data acquisition strategies and their potential use of stolen intellectual property to advance their AI capabilities. She reflected on the vast amount of data China has stolen from the United States, hinting at the significant implications this has for AI-enhanced capabilities and strategic competition, stating, "Director Wray [of the FBI] recently said that he believes that the amount of data that has been stolen from the United States, from every country in the world combined, is still less than the amount of data that China has stolen from the United States."

However, the narrative that the U.S. and China are locked in an AI arms race or competition over data that will determine the future of global geopolitics and the global economy may be over-hype according to Roberto Gonzáles. He further states "there's compelling evidence that many analysts are overestimating China's current AI capabilities and even its military capabilities. While it's true that China's technologies have improved greatly over the past decade, it's also important to avoid exaggerating the improvements by claiming that they're an imminent threat to U.S. national security." Gonzáles continued, warning that "flawed assessments on both sides run the risk of making the AI arms race a self-fulfilling prophecy.

Russia's Use of Artificial Intelligence

One cannot have a meaningful conversation on strategic competition without including Russian capabilities. While the main concern was not Russia gaining a competitive technological edge, instead discussion focused on how the Russian state and military are implementing AI. General Bryan Fenton acknowledged the "Russian military and the Russian Federation are also using large language models and those tools to conduct reconnaissance of satellite capabilities to support their operations in a cyber and space domain" Major Juha Kukkola of the Finish Defense Forces also mentioned how "Russia is very interested in developing AI solutions for economic purposes, for controlling its own society, for information warfare and for conventional and nuclear warfare."

Regarding information warfare, Todd Helmus mentioned "Russia has a huge apparatus for sowing disinformation" that can target multiple audiences. Helmus also commented how historically "Russians have targeted political partisan actors in the United States" and that "it's going to be a big [national security] issue if the U.S. faces a conflict in the future. Those partisan divides are going to be targeted by adversaries to upend the U.S. political will for that conflict." A fellow panelist, Heather Ashby thoroughly discussed how Russia used disinformation campaigns in its invasion of Ukraine. She also pointed out how "most of the Deep Fakes that take place are targeted towards women. So that's another tool when we think about conflict dynamics, is when conflicts take place, you have certain militaries, malicious targeting women and engaging in sexual and gender-based violence... [Additionally], the Russians have used this against a Ukrainian MP previously a couple of years ago of creating pornographic image of her and releasing that online. And so that could be a tool that state and non-state actors use." Vilma Luoma-aho warned that all forms of "communication is increasingly vulnerable in the AI era to hijacking;" a weakness that Russia has no qualms exploiting.

Regional Perspectives on AI

In the great power competition, the focus is on major players such China, Iran or Russia; however, Ylli Bajraktari also mentioned how in terms of strategic competition, we are entering a "new phase in which you will have an emergence of new players, new actors in this space. I think UAE and their release of their Falcon models is a great example that even small countries, there's a lot of resources can display in this space."

Major Kukkola stated the "development of AI capabilities is of critical importance for Finland and for Sweden and national security as we are small states next to Russia. Although both

states have high technological innovation, potential modern digital infrastructure, and skilled workforce, we have very limited resources concerning [things] like microchips, large data sets, and of course money. Therefore, everything related to AI cannot be done nationally in small states." Most countries will have to get technological resources from either the United States or the People's Republic of China. However, Julian Mueller-Kalen, voiced that there is a "huge economic cost for those countries to have to choose sites between the United States and China," which may even lead to a bifurcation of supply chains.

The U.S., specifically the Department of State, needs to work collaboratively with countries, Daniel Remler advocated to "appeal to states around the world regardless of income and regardless of specific strategic context in many cases." He stated, "the key thing is to understand the aspirations of states, like India, to use AI to leapfrog up the development rankings and to give them the best offer that we can in terms of why partnering with the United States is in their interest economically, strategically." As artificial intelligence becomes a critical component of strategic competition, it requires thoughtful integration in national security policies and applications.

Integration of AI in National Security

There is no denying artificial intelligence's practical applications in the national security realm; however, John Shanahan addressed the "rhetoric-reality mismatch" in AI, acknowledging the gap between the expectations set by science fiction and the current capabilities of AI, particularly large language models. Such discrepancies reflect the theme of AI being overrated or over-hyped. Matthew Mullarkey even claimed "saying AI is a terrible misnomer, right? We're using it because it's easy, functional, we kind of get what it is. But to be truthful, there's no true artificial intelligence in the world today that we're aware of, okay, these are all models that are being trained." Even if there is mismatch between expectations and the reality of using AI, the integration of artificial intelligence can still streamline military operations. Mark Abdollahian recognized that "national security interests come and go, but the national security interest that stays the same is owning the operating environment. Now this operating environment is changing faster than we realize, and it's changing directions" towards the utilization of large language models and gathering immense amounts of data.

The first Chief Technology Officer of CENTCOM, Schuyler Moore, stressed the significance of AI in enhancing the efficiency and safety of defense operations. She highlighted the importance of direct benefits to end-users, questioning, "Have we saved you time? Have you been able to do your job better? Are you safer when you are doing your job?" Her approaches to evaluating AI's success in the field by its operational effectiveness and practical utility to personnel. John Turner asserted how AI and data analytics are utilized to generate decision advantages from "the team room to the boardroom," highlighting the broad application spectrum of AI from operational contexts to organizational management within the Department of Defense (DOD). His detailed explanation of the DOD's data strategy underscores the critical role of foundational data quality for effective AI deployment: "If you don't logically start with a foundation of quality data... then you'll be out of sync as you try to apply the rest."

Using an iceberg analogy, John Shanahan described the complexity of AI integration in the national security enterprise, with the visible part of AI technology being just a small component of the overall challenge. He asserted, "what matters most is the 80 to 90% of the iceberg below the waterline... the information architecture, the underlying architecture," highlighting the need for substantial work on the foundational systems supporting AI deployment. Shanahan called for a modernization of these systems to align with best practices from the commercial software industry.

Even though there was general sense of excitement about AI integration in military operations, Roberto González reminded the audience that "banking on high tech great power conflicts may have the unintended effect of leaving the U.S. somewhat less prepared for longer conflicts in which western power struggle vainly against insurgents who will fight back rigging the rules of the game in their own favor with low tech, but effective tactics... Ironically, the long-term advantage may go to the low tech. Also, let's not forget that technological superiority didn't lead to US victories in Vietnam or in Iraq or in Afghanistan."

Ethical Application and Keeping Humans in the Loop

Reflecting on the responsible integration of AI, Kathleen Hicks stressed the importance of aligning AI use with democratic values and ethics, pointing out the care taken to avoid potential dangers of AI technology. She asserted, "even as we're swiftly and safely embedding AI into many aspects of our mission... we do so mindful of AI's potential dangers." She called for constant vigilance and continuous improvement to maintain technological leadership, urging the community of innovators, from students to scientists, to contribute actively to the nation's strategic efforts in AI.

Continuing the same theme, General Frank McKenzie was explicit on the importance of ethical considerations, particularly the need for human judgment in life-and-death

decisions, to ensure AI usage aligns with human values. His remarks suggested a nuanced approach to regulating AI, advocating for its use in less critical domains like logistics while cautioning against its unchecked application in combat situations. "I think the U.S. perspective should be you need to apply these tools ethically, which means there's got to be human judgment involved, particularly if you're going to kill someone."

The potential and current use for artificial intelligence is considered a net positive, but many speakers echoed the desire to keep humans in the decision-making loop. John Licato affirmed "not only we want the human in the loop, even when we know the AI can do well for backup purposes, but I wonder how much of that is that we need someone to blame if things go wrong." Having a human in the loop for accountability may also "give a false sense that we're doing something to avoid, to mitigate risk" David Oakley cautioned. Risk is inherent when utilizing AI in scenarios with a high level of complexity. Still "people are much more comfortable with having the human in the loop to handle" decisions, Leslie Babich posited. She also mentioned there needs to be "balance between the hardware and the humans. The number one SOF truth is humans are more important than hardware. And I will always believe that because the tool is only as good as the people that are trained to use it." Sharon Daniels agreed with Babich, insisting "even if you're doing a full end-to-end automation process, if you are augmenting humans' capabilities of analyzing, and even with automation, the human in the loop...if you are using some of the newer technologies like an LLM, there's an absolute requirement to have human in the loop at that level."

Julian Mueller-Kalen warned, "if you take that human out of the decision-making loop, I think we are going to be in a world in which the dangers are far greater than we can yet anticipate...because those large language models have become so increasingly complex that we don't even understand how they actually make decisions now." However, Peter Bovet Emanuel stated, "allowing AI to be part of decision-making calculus implies making trade-offs such as less human control decision advantages will probably have to include the acceptance of a new decision continuum." The Department of Defense is committed to keeping humans in this new decision-making continuum when developing and applying AI technologies. Nonetheless, there was recognition by speakers that American adversaries were not bound by similar ethical values. Major Kukkola stated in his opinion "that we should fight fire with fire. There has been a lot of ethics, talk about ethics here and I totally agree, but we shouldn't tie our hands behind our backs because they are not going to do that." General Fenton also observed "North Korea and Iran use AI to assist in their cyber-attacks and cryptocurrency theft. And none of these applications cares about an ethical approach or anything rooted in democratic values because they don't have to, and they don't want to."

The Triangle of Innovation

Development of AI technology requires an interplay of funding, resources, and partnerships between government, industry, and academic research institutions. Mark Abdollahian claimed, "most of the innovations coming from AI coming from the IO [information operation] space are not from three letter agencies. They're not coming from corporations with multi-billion-dollar budgets. They're coming from individuals, and those individuals have access to technology." In his conversation with Dr. Mohapatra, Ylli Bajraktari elaborated on the triangle of innovation between academia, industry, and government. "How do we make sure that academia is set to win in this [strategic] competition... because building these large language models requires a lot of powerful semiconductors that are really expensive. Most of the private sector companies have access to this.... And then others that have academia still needs access to these resources so they can invest in basic RD [research and development], invest in application, invest in the next generation of innovation in campuses, and then private sector can scale this." Damon Woodard also advocated for more investment in AI research infrastructure, like the $70 million AI supercomputer, enhancing the University of Florida's "research capabilities to investigate advanced topics in artificial intelligence."

Contrasting with Abdollahian's previous statement, Adriana Avakian perceives how "industry is delivering and developing those technologies for defense... what I see today is that they're critical technologies that are defense first that similar to that spawning of other opportunities in the commercial sector that we will see in the next two to three years being part of critical infrastructure, critical industry." Fundamentally, the defense sector is providing an impetus and funding to drive AI innovation.

Roberto González raised concerns about the "military's demand for AI products serving to justify and accelerate U.S. defense spending. In the tech sector when Amazon is awarded a $10 billion cloud computing contract from the NSA or when Microsoft lands a $22 billion VR headset contract with the Army, it's understandable why tech executives repeat the grand narrative. It's in their interest to do so and in the interest of their shareholders. That said, we should recognize that today the nature of the military industrial complex has changed. The defense department has come to rely more on business leaders than business leaders on the defense department." Meanwhile, General Fenton knows "these partnerships give us an opportunity to alter the tactics and reshape the landscape either of conflict or in

competition or crisis to our advantage, advantage to team democracy. But it can't be done without partnering with academia, industry and international teammates."

Regardless of the motivation for AI technological innovation, the issue of regulating the development and application of artificial intelligence without stifling innovation was a topic discussed throughout the Tampa Summit. "There is this fear whenever we bring up the topic of regulation with AI that it's going to just hamstring us in our ability to adapt and innovate quickly and that'll make us lose our competitive advantage" John Licato stated. Regulation of AI is shortsighted, Damon Woodard believes. "When we talk about artificial intelligence, we have three components. We have data, we have math, and we have compute. The best you can hope for is to regulate the data." There is an overarching concern that too much regulation will prevent research and industry from rapidly keeping pace with demand for AI products. Congresswoman Laurel Lee emphasized the importance of having "balanced legislation that will protect us from the harmful uses of AI, while also promoting innovation and First Amendment rights." However, what the balance will look like remains a topic of debate.

Alexandra Seymour spoke extensively on the ongoing policy debates about the regulation of AI, emphasizing the importance of not hindering technological progress stating, "anything that we do, we want to make sure that we are not slowing down our innovation. We want to be able to stay ahead," underlining the critical balance needed promote safe yet progressive AI development. Jags Kandasamy advocated for a development first and then regulate later approach. He believed we should "not be too strict in our regulations, learn step-by-step and then start to regulate from there rather than going a hundred percent regulation from day one." Especially since "our regulators, the elected officials aren't necessarily computer scientists or engineers or business innovators. And by self-disclosure, they don't have the necessary background to initially understand what to do and how to [regulate]," as Christopher Hunter pointed out.

General McKenzie also touched on the importance of regulating AI to prevent misuse, especially in creating or manipulating events in the information space. His concern over Deep fakes and the manipulation of information underscores the need for careful consideration in regulating AI technologies to ensure they are used responsibly without hindering their development and application in national security.

With the importance of reasonable regulation is recognized, Roberto Gonzáles believes regulation is being hindered by the amount of money spent by private and defense industry to lobby Congress. Lobbying "play[s] a role in I think slowing down the [regulatory] process and not allowing this country to have the kind of regulation...that's part of what makes this country very different from the EU, and I think that's something that's really hurting us in the end." Peter Bovet Emanuel advocated a more pragmatic approach to "reflect reality and not be hindered by ethics or current legislation because I believe that you do that. If you build your use cases from reality and realism, then that appreciation of ethics and legislation and being responsible and so on will have something tangible to grasp rather than the opposite. That will only be a hindrance."

John Shanahan "fear[s] two things. One is over-regulation, the other is under regulation. So, finding the sweet spot is doable because that's what we've done in the national security enterprise for as long as we've had weapon systems. It works. It's not perfect. We make mistakes, but I'm telling you there is a process in place to get it right." Even though the United States struggles with the right balance of innovation and internal regulation, the U.S. "also have issues with respect to countries like China who are actually developing a lot of AI regulation. China's very eager to find ways to become a leader" stated Peter Yu. Similar to China, the European Union has taken a stronger stance for regulation of artificial intelligence, and data privacy. As Daniel Remler reminded the audience, the United States is also "engaging in strategic competition to write the rules for responsible AI around the world," not just the development and use of AI.

Data Dominance: The Weapon of the Future

Throughout the summit, the importance of data, was repeatedly highlighted, Kathleen Hicks called data "foundational in the AI hierarchy of needs." Craig Martell highlighted the critical importance of quality data and proper talent management in leveraging AI technologies effectively within the Department of Defense. He stressed that without high-quality data, efforts to integrate AI are fundamentally flawed, underscoring the foundational role that robust data management plays in successful AI applications. He emphasized the practical challenges of AI integration, saying: "The short answer is we don't think a lot about AI, and we think a lot about data, an unbelievable amount about data and then behind data, we think a lot about talent management because to get to AI, you need high-quality data, and if you don't have high-quality data, you're fooling yourself."

Large language models are being built from massive quantities of aggregated data—making the quality data extremely important when training these models. Peter Bovet Emanuel addressed the cognitive challenges posed by the volume and speed of data, "we know that the amount

of data and information as well as the speed challenges our human cognitive abilities as well as some of the paradigms of human command and control and our ability to manage situational awareness in operations." When using AI models, practitioners, such as Jags Kandasamy, must "deal with the three Vs of big data ...velocity, the volume, and the variety" and use that data to deliver a successful product. The sheer quantity of data being collected "has huge potential, but unless we have a way to rapidly sift through it to find important information that potential will remain untapped," Vice Admiral Cooper explained. Peter Bovet Emanuel further pointed out the crucial role of AI in expanding human decision-making capacities by integrating and managing vast amounts of data, thus potentially enhancing operational command and control in strategic scenarios.

While AI models can process data and highlight patterns of behaviors at much faster speeds than a human could, Damon Woodard recognized that "patterns [are] useful for making decisions, and some of those patterns can be completely wrong. It's up to the human to actually control what's the final decision to be made. I think we're a bit far off from coming up with an AI system that can replicate how a human makes decisions just because the data to make the decisions is not available, all that information is not available to the AI system." Schuyler Moore echoed his statement noting, "AI is not there yet for complex decision-making." She emphasizes the importance of acknowledging AI's varied levels of maturity and advancement, advocating for a balanced understanding that differentiates between broader and narrower applications of AI technology. Even though AI is not capable of replicating human made decisions yet, Craig Martell believes "in order to be able to deploy AI broadly, we have to think both about how do we gather the data that's going to be the most representative of the future and then we have to think about how do we monitor the model to be able to tell whether it's continuing to give value" when processing information.

General McKenzie discussed the technological advances and challenges within AI in processing and analyzing extensive data sets like terrain from surveillance systems. He mentioned the historical context of data processing, comparing past and present capabilities, and how AI now plays a crucial role in interpreting large volumes of information quickly and effectively. He also touched on the transformative impact of quantum computing in defense, particularly in code-breaking and code generation, and how it synergizes with AI to create significant advancements. He highlighted the necessity of preparing for AI applications that can operate independently, especially given the vulnerability of communication and control systems in combat scenarios. "Increasingly you're going to have to think about AI applications that are able to operate independently," he said pointing to the strategic need for autonomous systems capable of functioning in disrupted environments.

Conversations also touched upon data accessibility and sharing mechanisms between federal agencies, allies and partners while maintaining data integrity. Christopher Hunter mentioned how data integrity can be compared to protecting critical infrastructure and believes "it is a massive challenge, massive problem, but also massive opportunity both for us in the United States and our allies to understand how to use that effectively, but also to know that it's already being done to us and how to ensure that we have the type of data integrity that allows us to develop artificial intelligence applications that people trust and that can be put to good use." Trustworthy data collected in an ethical manner should beget trustworthy AI. And so very fitting here that we're talking about the importance of data management as it pertains to competition and how we think about data in the role of competition."

Future of the AI Workforce

When discussing the future of artificial intelligence at a policy and practical level, there is always fear about how AI will affect the workforce. Todd Borkey mentioned some "academics state, 40% of human jobs are replaceable by AI in the next 10 years. That's really scary. The socioeconomic impact of that would be severe." The main issue with AI and the workforce for Jags Kandasamy "is that the speed of innovation, the rapid acceptance and adoption of the technology I've never seen before at this scale," which has the potential to greatly upset the workforce. As the nature of work evolves, "there are many reasons for jobs to be automated, but there is quite some research on that. And it boils down to what skills and abilities are needed in the future," Joel Brynielsson claims. Throughout the three days of the Summit, skill development and up-training was the focus when discussing an AI workforce. As Prasant Mohapatra aptly said, "critical thinking, ethical awareness and human judgment are essential to use AI technologies in a more productive way. These tools can generate possibilities and augment the strength of human capital but cannot replace it."

As artificial intelligence capabilities and technology rapidly advance, Damon Woodard advised that "we can't forget about the people who are already in the workforce. AI is transforming everything in life, not just national security. So, up-skilling our current workforce so everyone can benefit from AI knowledge." While General Fenton proclaimed that "if we have one more dollar to spend in special operations command, we will spend it on our people transforming for the future in our estimation, starts with investing in our people. in education, in workforce development... [to have] a skilled, innovative and creative workforce."

Special Advisor to the CDAO, Angela Cough, mentioned how "the Department [of Defense] invests in education so much...we invest in that education, but we've got to give people the opportunity to use the education as well." She continues, stating "from a workforce management perspective, [there is a need] to create these AI practitioners that actually have tremendous value and the ability to translate our problem sets to industry to be able to help us solve them." The DOD is not the only place committed to up-skilling their workforce, Avik Batra from Accenture revealed "we're investing 3 billion in up-skilling our workforce. And it's not because we're trying to incentivize people to have the skills go deliver for our solutions is because we truly believe that this is the future."

While some task-based positions may eventually become automated "there's always going to be that need for subject matter experts" Joe Partlow reassured. Positions that require social-emotional intelligence and critical thinking skills will continue to be filled by humans. Eric Vogelpohl even said that "curiosity and the drive to learn how these things can support you is the number one skill right now you can adopt," regarding workers who want to up-skill.

During the discussion on intersection of artificial intelligence and national security, speakers stressed the importance of professional education and training of the current workforce as well as developing K-12 curriculum to address media literacy and critical thinking skills. In fact, K-12 and secondary education remain a key factor in the development of the future AI practitioners. Heather Ashby mentioned how "New Jersey [passed] a law saying that media literacy is mandated training or part of the curriculum for K-12 education...[B]ut over the years, we have noticed that you can't just rely on digital media literacy. You need to find other ways. And I think education is so important that it's not just media literacy, it's teaching people how to think critically and search for sources." John Licato echoed the need for "this skill set that you all have mentioned often goes under critical thinking, but also data literacy, media literacy, and the education colleges are definitely focusing on that and try to make it a priority." Secondary education and academic centers, such as the University of South Florida, are not "just preparing students for the emerging AI revolution, we're actively seeking to shape it. We're at the forefront of creating the AI workforce of tomorrow" Eric Eisenberg, the Senior Vice President for University-Community Partnerships, declared.
Kirstjen Nielsen pointed out the need for 'soft' and 'formal' education to enhance public understanding of AI technologies, particularly around phenomena like deep fakes and chatbots. She notes the tendency of individuals to inadvertently share sensitive information with AI systems and stresses, "the other danger I see with any of the chatbots is that because it seems human, we see instance after instance of people sort of unloading all of their sensitive personal information."

Despite AI becoming a critical component of the workforce, it does not mean STEM education is the only kind of education applicable to artificial intelligence. "Oftentimes people who are not very technically minded, they think that there's a very high barrier to entry to be involved in the STEM ecosystem because perhaps they're not interested in mathematics or computer science, but their perspective is also needed to get at some of these problems," Alexandra Seymour revealed. Agreeing with Seymour's sentiments, Adriana Avakian said, "don't think that because you're not a C sharp programmer, you can't get in AI, there is many different disciplines where we hire for UX researchers, we hire across multiple disciplines."

Humanities and social sciences are equally important in educating the future workforce. Peter Yu said "whenever we think about AI, it's really about humans, about human condition. The more we actually understand the non-tonal aspects, the more we are more informed about ethical issues, about what have regulatory issues we have to address. And so, I think it's very important for us to broad-based approach to try to figure out how to move forward." Finally, Matthew Mullarkey reminded the audience, "the challenge that we have, as academics to train our students to be prepared for your workforce because the fundamentals of critical thinking, [is] how to ask elegant questions."

Conclusion

At its core, AI is the use of data to solve problems, as Craig Martell said, "AI is statistics at scale, you gather data from the past, you predict the future." Artificial intelligence and large language models will continue to evolve rapidly and be integrated into all facets of national security and strategic competition. Policy and decision makers must be aware of the need for balance between innovation, ethical application, regulation, and competition but also realize, as Alexandra Seymour described, "AI is not some monolithic one size fits all technology. It is a tool, and it is used in very specific applications, and it is used in very specific sector."

The BIG 3 Takeaways

1. **The Summit highlighted how artificial intelligence is becoming a key factor in strategic competition not only in terms of its application but in its technological development and regulation. Artificial intelligence can democratize the battlefield, allowing new players to emerge in the great power competition and enable non-state actors and smaller entities to access technology previously limited to wealthy nations.**

2. **Artificial intelligence will be used to augment human capabilities and decision making, not replace it. There were strong commitments from the national security and private sectors to keep humans in the decision-making loop as well as educate, train and develop an AI literate workforce.**

3. **The quantity and quality of data being collected has the potential to play a huge role in the development of AI and its integration into national security. Practitioners need to establish a strong foundation of quality data to train AI models for relevant data to be deployed in specific operational environments.**

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Tampa Summit 3: Artificial Intelligence and the Era of Strategic Competition
Day 1 March 5th, 2024:

Speakers:
General (Ret) Frank McKenzie, Executive Director, Global and National Security Institute and Florida Center for Cybersecurity (Cyber Florida)
Congresswoman Laurel Lee, Florida, 15th Congressional District
Vice Admiral Brad Cooper, Deputy Commander, U.S. Central Command (USCENTCOM)
The Honorable Kathleen Hicks, PhD, U.S. Deputy Secretary of Defense
The Honorable Kirstjen Nielsen, former Secretary of Homeland Security

Panel 1: How Artificial Intelligence Is Transforming National Security
Moderator: Carolyne Davidson, Associate Dean of Administration and Outreach, National Defense University
Damon L. Woodard, PhD, Director of the Florida Institute for National Security
LTG (ret) John Shanahan, Adjunct Senior Fellow, CNAS
Schuyler Moore, Chief Technology Officer, U.S. Central Command

Panel 2: Artificial Intelligence and Great Power Competition
Moderator: Andrew Whiskeyman, National Defense University
Lt. Gen (Ret) John Bansemer, Director of the CyberAI Project, CSET
Julian Mueller-Kaler, Deputy Director, Strategic Foresight Hub at the Stimson Center
Daniel Remler, AI Policy Coordinator, Department of State

Panel 3: The Role of AI-Powered Disinformation in Conflict
Moderator: Joshua M. Scacco, PhD, Director, Center for Sustainable Democracy University of South Florida
Heather Ashby, PhD, Senior Strategy and Management Consultant, Corner Alliance
Todd C. Helmus, PhD, Senior Behavioral Scientist, Pardee RAND Graduate School
Mark Abdollahian, PhD, Professor, Claremont Graduate University

Day 2 March 6th, 2024
Speakers:
Prasant Mohapatra, PhD, Provost University of South Florida
General Bryan P. Fenton, Commander of USSOCOM

Round Table 1: Data Dominance and its Impact on AI
Moderator: David Oakley, PhD, Academic Director, GNSI
Alexandra Seymour, Staff Director, Cybersecurity and Infrastructure Protection Subcommittee, House Homeland Security Committee
John Turner, Acting Deputy CDAO for Policy, CDAO
Roberto González, PhD, San José State University

Panel 4: Small States' Perspective on AI and Global Security
Moderator: Golfo Alexopoulos, PhD, Director, Institute for Russian, European and Eurasian Studies, University of South Florida
Joel Brynielsson, PhD, Research Director, Swedish Defence Research Agency
Peter Bovet Emanuel, PhD Researcher, Swedish Defense University, Centre for Special Operations Research
Major Juha Kukkola, PhD, Associate Professor, Finnish Defence Force
Vilma Luoma-aho, PhD, Professor and Vice Dean, School of Business and Economics, University of Jyväskylä

Breakout Sessions:
Breakout 1: Europe, Russia and AI-Enabled Security Threat
Golfo Alexopoulos, PhD, Joel Brynielsson, PhD, Peter Bovet Emanuel, PhD Researcher, Major Juha Kukkola, PhD,

Breakout 2: Medical Integration of Artificial Intelligence
Dr. Haru Okuda, MD, Executive Director, USF Health, Center for Advanced Medical Learning and Simulation
Aleksandra Karolak, PhD, Assistant Member, Department of Machine Learning, Moffitt Cancer Center and Research Institute
Dr. Andrew Borkowski, MD, Chief AI Officer, VA Sunshine Network
Dr. Nishit Patel, MD (Panelist), Vice President and Chief Medical Informatics Officer, Tampa General Hospital

Breakout 3: Artificial Intelligence Simulation / Wargame
Walter Kulzy, Senior Operations Research Scientist, Johns Hopkins University

Breakout 4: AI-What's Next
Facilitator: Robert Hammond, PhD, Director for the Center of Marketing and Sales Innovation, University of South Florida

Day 3 March 7th, 2024

Speakers:
Eric Eisenberg, PhD, Senior Vice President University-Community Partnerships, University of South Florida
Craig Martell, PhD, Chief Digital and Artificial Intelligence Officer, CDAO
Ylli Bajraktari, President/CEO, Special Competitive Studies Project (SCSP)
Prasant Mohapatra, PhD, Provost, University of South Florida

Panel 5:
Moderator: John Licato, PhD, Assistant Professor, College of Science and Engineering, University of South Florida
Leslie Babich, Director, SOFWERX
Jags Kandasamy, CEO, Latent AI
Peter Yu, Regents Professor of Law and Communication and Director, Center for Law and Intellectual Property
Todd Borkey, Executive VP and Chief Technology Officer, Huntington Ingalls Industries

Panel 6: How Can Tampa Bay Take a Leadership Role in AI Innovation?
Christopher Hunter, Chief Legal Officer, IWP Family Office
Adriana Avakian, Founder / CEO, TheIncLab

Research Quick Shots:
Learning Co-Speech Gesture for Multimodal Aphasia Type Detection
Daeun Lee, PhD candidate and Visiting Scholar
Applications of Cognitive Modeling in Multifactor Authentication
Stephen Steinle, PhD Candidate
FT-CycleGAN: a novel frequency-based loss function for visual-and-IR image translation to boost multimodal object detection
Nicolas Bustos, PhD Candidate
The Impact of using Data Fusion with Synthetic Images on Multimodal Object Detection
Mehrsa Mashhadi, PhD Candidate
Intelligent Dynamically Adaptive Simulation for Medical Trauma Team Training
Dr. Paul Hungler, Associate Professor, Queens University

Roundtable 2: Developing the Future AI Workforce
Moderator: Matthew Mullarkey, Director of the Doctor of Business Administration, Muma College of Business, University of South Florida
Avik Batra, Managing Director, Accenture Song
Angela Cough, Senior Advisor, Digital Talent, CDAO
Joe Partlow, Chief Technology Officer, ReliaQuest
Sharon Daniels, Senior Leader, Arria NLG
Eric Vogelpohl, Chief Technology Officer, Presidio

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About USF's Global and National Security Institute

Today's national security environment is increasingly complex and covers global problems such as strategic competition, extremism, biothreats, climate change, disinformation and cybercrime.

To address these challenges, the University of South Florida formed the Global and National Security Institute (GNSI), positioning USF as a leader in developing robust and interdisciplinary analyses of large-scale global and national security problems.

Advances in areas such as artificial intelligence, robotics, extended reality, quantum computing and biometrics will require national security policymakers to understand new complexities. GNSI will work closely with leaders and experts from academia, government and the private sector to provide actionable solutions for decision-makers at local, state, national and global levels.

Focused on the boundary of security policy and technology, GNSI is well situated to leverage the existing academic excellence of USF, a member of the Association of American Universities (AAU).

Opportunities currently exist to sponsor GNSI's events and conferences and to provide operational support to extend the efforts of the institute under the leadership of its executive director, retired Gen. Frank McKenzie, former Commander, U.S. Central Command.

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