A Digital Military Talent Initiative for Noncitizen Technologists

Jordan Sun
James Long
Alex McLeod
Matthew Fitzgerald

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Summary

Competent and innovative technologists are crucial to the future of U.S. national security. But the National Security Commission on Artificial Intelligence (NSCAI) warns that a digital-talent deficit at the Department of Defense (DOD) represents the greatest impediment to the U.S. military’s effective embrace of emerging technologies (such as artificial intelligence). Absent radical course correction, demographic factors, including aging populations, stand to exacerbate this problem in coming years.

A new Digital Military Talent Initiative could help address the military’s digital-talent gap by providing an expedited path to U.S. citizenship through military service for noncitizen technologists aligned to NSCAI archetypes. Modernization of an already-existing DoD program, coupled with minor tweaks to the National Defense Authorization Act, could infuse digital talent by providing vetted noncitizens a pathway to accelerated naturalization through military service.

Challenge and Opportunity

A paucity of digital talent threatens the U.S. military’s current and future capability goals, as evidenced by the military’s ongoing inability to staff cyber units or achieve objectives set by the Pentagon’s Chief Data Officer. Global competition for digital talent requires the U.S. to get more creative with recruitment. The Director of the DOD’s Defense Innovation Unit noted that the Pentagon’s efforts to add science and technology talent to its workforce are “insufficient” given competitors’ gains in these arenas.

If current efforts are insufficient to meet digital-talent needs, future efforts may have to be drastic. Projections suggest the U.S. population is aging, such that fewer working-age persons will be available relative to the broader population in years to come. This trend may have an outsized negative impact on the military’s available talent pool, as the military fills its ranks predominantly with younger workers. Compounding the problem, military-eligible tech talent is often highly sought-after in the private sector, where compensation may be orders of magnitude greater than in the military. Last, lack of lifestyle perks and flexibility may make the military a hard sell, especially for innovative and free-thinking talent.

Even the newest models for bringing private-sector talent into the military, such as the U.S. Digital Corps and cyber direct-hire authorities, only harness talent from existing U.S. citizens. Proposals for training more government technologists (i.e., by creating a federal digital service academy) are limited by the number of citizens who may be willing and able to participate.

There is a blueprint that may help overcome these challenges. During the Global War on Terror, the U.S. military enlisted over 10,000 foreign volunteers through the Military Acquisitions Vital to the National Interest (MAVNI) program. Under this program, a select group of pre-screened noncitizens was offered the chance to obtain U.S.
citizenship in exchange for military service. Notwithstanding an untimely termination that gave rise to a series of lawsuits, MAVNI was widely recognized as a success. However, the program was somewhat limited in scope. Although many MAVNI participants held advanced degrees, the skillsets the program sought were limited to certain foreign languages and medical specialties. Modernizing and expanding MAVNI — with statutory authority commensurate to the realities of modern conflict — may help mitigate digital talent shortages.

Modernizing and expanding MAVNI would also align with the NSCAI’s recommendation for a “comprehensive” legislative strategy to enable “highly skilled immigrants to encourage more AI talent to study, work, and remain in the United States.” Our nation’s inadequate strategies for recruiting foreign digital talent have caused leading companies like Google to appeal for Congressional assistance, even as peer nations like Canada have developed novel, effective policies to support digital immigration. During the Trump administration, Toronto became the fastest-growing location for tech-sector jobs in North America. The upshot is clear: the U.S. military — and the U.S. generally — faces a widening tech talent gap that requires out-of-the-box thinking to address.

Plan of Action

The authors propose a three-part plan of action for launching a national Digital Military Talent Initiative. Part 1 engenders minor modifications to existing law governing U.S. military eligibility. Part 2 involves modernizing the existing MAVNI program by expanding the definition of skills deemed “vital to the national interest”. Part 3 involves piloting and scaling the modernized MAVNI program in line with leading national security and cybersecurity practices. More detail on each of these components is provided below.


Three sections of the U.S. Code should be modified. First, 10 U.S.C. § 504(b)(2) — which governs military enlistment of individuals who are neither U.S. citizens, permanent residents, nor citizens of Micronesia, the Marshall Islands, or Palau,¹ should be modified to read:

“Notwithstanding paragraph (1), and subject to paragraph (3), the Secretary concerned may authorize enlistment of a person not described in paragraph (1) if the Secretary determines that such person possesses a critical skill or expertise that is vital to the national interest.”

In other words, 10 U.S.C. § 504(b)(2) should be modified by removing provision (B), which currently requires that an enlistee use their referenced “critical skill or expertise” in their “primary daily duties”. This requirement unnecessarily inhibits military commanders at all levels, since critical skills and expertise often include skills and expertise deployed only in moments of the utmost exigency.

¹ These three island nations are parties to Compacts of Free Association with the U.S.
Second, 10 U.S.C. § 504(b)(3) should be modified to read:

“A Secretary concerned may not authorize more than 10,000 enlistments under paragraph (2) per military department in a calendar year until after the Secretary of Defense submits to Congress written notice of the intent of that Secretary concerned to authorize more than 10,000 such enlistments in a calendar year.”

This language increases the enlistment number at which the Secretary of Defense is statutorily obligated to notify Congress and does away with the 30-day waiting period that the Secretary must wait between notifying Congress and proceeding with the enlistment authorization. These modifications are needed to accommodate anticipated recruitment under an expanded MAVNI and help the Secretary to move quickly on leveraging such a talent pool. It should be noted that over 14,000 individuals expressed interest in the first year that the U.S. Army sought to enlist recruits in the Global War on Terror pursuant to 10 U.S.C. § 504(b)(2)).

Third, 8 U.S.C. § 1440(a) should be modified by adding the following new subsection:

“Any person enlisted pursuant to 10 U.S.C. §504(b)(2) who has served honorably in an active-duty status in the military, during any period which the President by Executive Order designates as a period in which Armed Forces of the United States are or were engaged in nontraditional military operations in preparation for a substantial foreign threat that is new or novel in nature, may be naturalized as provided in this section if (1) at the time of enlistment, reenlistment, extension of enlistment, or induction such person shall have been in the United States, or (2) at any time subsequent to enlistment or induction such person shall have been lawfully admitted to the United States for permanent residence.”

This language increases the President's authority to authorize expedited naturalization in certain instances of sub-threshold conflict. The included requirement that the President expressly designate such instances via an Executive Order creates political accountability around this authority.

Part 2: Modernize the DOD’s existing MAVNI program by authorizing enlistment for certain vetted noncitizens with critical digital competencies.

The Military Acquisitions Vital to the National Interest program authorizes certain noncitizens to enlist if they possess critical skills limited to certain foreign languages and medical specialties. As the demands of modern conflict have adjusted at the speed of technological advancement, so too should the way the U.S. staffs its military. The DOD should expand the MAVNI program to include skills aligned to the NSCAI’s digital-talent archetypes, the President’s recent Executive Order on improving the nation’s cybersecurity, and the FY2022 National Defense Authorization Act. The DOD should also validate key assumptions to confirm pilot feasibility, including:

- Needs of military service-software factories, as well as operational units and enterprise programs pursuing digital transformations.
• Ability to leverage noncitizen technologists capable of developing and shipping code in zero trust environments.

• Needs related to specific tech applications that can be developed with minimal risk and have potential for significant impact.

**Part 3: Pilot and scale the modernized MAVNI program to grow recruitment numbers and increase impact on military-service missions.**

DOD should scale based on need using the following steps:

1. Determine aggregate need for digital talent across the joint services to meet operational and institutional requirements.

2. Define enlistment pathways for recruited digital talent. For instance, a recruit might first enter into a non-classified military occupational specialty — whether a unique specialty for uncleared digital talent or a traditional specialty. After naturalization, the recruit could a) shift to an existing enlisted role in information technology/networking, cyber, and electronic warfare, b) enter a potentially new digital-specialty role, or c) commission as a warrant or officer.

3. Scale MAVNI program infrastructure in alignment with DOD zero trust principles and architecture requirements.

4. Develop professional-development and career pathways that incentivize recruited digital talent to remain engaged with the military requirements and to communicate about their experiences and successes.

5. Gather and implement feedback from program alumni and participants on topics including recruitment, retention, training, incentives, community-building, diversity, and inclusion.

**Conclusion**

The DOD’s current digital-talent deficiencies may evolve into an existential vulnerability without significant course correction. The DOD can begin addressing these deficiencies through an integrated Digital Military Talent Initiative. Such an initiative should comprise three parts: (1) amending existing law governing enlistment eligibility; (2) expanding the definition of skills deemed “vital to the national interest;” and (3) piloting and scaling the MAVNI program to recruit tech talent for the military in alignment with leading national security and cybersecurity practices. Together, these actions will dramatically grow the U.S. military’s eligible digital talent pool, thus enabling it to better compete in future sub-threshold and armed conflict.
Frequently Asked Questions

1. The original version of MAVNI was cut short. Why will it succeed if brought back?

The Military Accessions Vital to the National Interest (MAVNI) program recruited noncitizens with needed language and/or medical expertise to serve in the U.S. military. Though widely regarded as successful, MAVNI did encounter friction, such as security concerns. The DOD can address such concerns for an expanded version of MAVNI by ensuring that the totality of contributor service through the program occurs in zero trust security environments, including those already championed by the Army’s Enterprise Cloud Management Agency. This will enable program participants to support critical mission requirements without placing underlying capabilities or operational data at risk. The DOD should also consider piloting a modernized MAVNI in use cases relating to software engineering. Software can be vetted through continuous integration-continuous deployment (CI/CD) pipelines prior to release, and recruited software engineers can generate features and capabilities for interacting with sensitive data without the engineers actually needing access to that data.

2. What makes now the right time to invest further in military digital talent capabilities?

In a global post-digital era, military operations and capabilities are also redefined. The military needs more tech talent to staff cyber units, operate military-software factories, and more. Furthermore, the most recent National Security Strategy’s emphasis on artificial intelligence and “attract[ing] and retain[ing] inventors and innovators” in the digital space highlights the need to think creatively about opportunities to recruit tech talent.

3. Why can’t the military rely on contracted talent to fill tech gaps?

A key reason why relying on contracted talent is a problematic approach is that the success of projects carried out by contractors depends on the education and experience of the military personnel providing project guidance. Recruitment and development of in-house tech talent is a better, more efficient way for the military to approach digital needs for the long term.

4. How common is military naturalization?

Very. Naturalization is the process for an individual to become a U.S. citizen if that individual was born outside of the U.S. Since 2002, the U.S. has naturalized more than 148,000 members of the U.S. military, both at home and abroad. In the last five years (FY2017–FY2021), the U.S. naturalized almost 30,000 service members. In FY2021, the U.S. naturalized 8,800 service members, a 90% increase over the previous year.
5. How does military naturalization work?

A military-service member who has served for one year or more — or who served during a designated period of conflict — can apply for naturalization with U.S. Citizenship and Immigration Services through the N-400 process. Other requirements for military naturalization include that the service member in question be separated under honorable conditions, be a lawful permanent resident upon application, and more. This process, while functional, can also be slow. An expedited path towards naturalization for service members with tech talent could help the military meet its digital needs.

6. What STEM and digital skills require additional recruitment efforts for a modernized MAVNI program?

The NSCAI buckets the archetypes the U.S. needs to train for AI competitiveness into Researchers, Implementers, End Users, and Informed Consumers. The Digital Military Talent Initiative will focus on recruiting researchers and implementers to enhance the U.S.’s capacity to digitally transform national security. Recruitment efforts should emphasize individuals with industry experience, informal training (self-taught, coding boot camps, and other industry-recognized, non-academic accreditation courses), and formal academic STEM education across AI, electrical and computer engineering, mechanical engineering, computer science, molecular biology, computational biology, biomedical engineering, cybersecurity, data science, mathematics, physics, human-computer interaction, robotics, and design. The objective is to recruit individuals who can operate in uniform as software engineers, data scientists, data analysts, product designers, hardware engineers, product management, technical program management, solutions architects, and technical information technology and cybersecurity specialists.

7. How would an expanded MAVNI benefit from incorporating zero trust principles?

Commonly used in software development pipelines, a zero trust stance “assume[s] that an attacker is present in the environment...an enterprise must continually analyze and evaluate the risks to its assets and business functions and then enact protections to mitigate these risks.” Federal zero trust cybersecurity practices are outlined in NIST Special Publication 800-207. Applying these principles to all operations and units using MAVNI recruits will help mitigate potential security vulnerabilities.
About the Authors

**Jordan Sun** is Head of Product, Design, and Engineering at Softbank Robotics America and a Major in the U.S. Army Reserve 75th Innovation Command. He previously served as former Chief Innovation Officer for the City of San José (CA) Mayor’s Office, in the U.S. national security community as a diplomat, and on In-Q-Tel’s investments team.

**James Long** is an innovation officer within the U.S. Special Operations Command and a Captain in the U.S. Special Operations Command Army Reserve Element. He has deep experience building digital-talent development programs. James served as a non-resident fellow at the Modern War Institute and published extensively on military innovation and talent management.

**Alex McLeod** is a military spouse and founder of the Refugee Upskilling Program (ReUP), a workforce-development nonprofit program. She previously served on the founding team for two social-impact enterprises dedicated to hiring immigrants, refugees, and internally displaced persons into the tech sector.
Matthew Fitzgerald served in the U.S. Army first as an infantry officer and then as a judge advocate. During his service, he advised the U.S. Army Recruiting Command on technology policy to expand digital recruitment efforts. His publications include work in the Harvard National Security Journal on the Department of Defense’s ethics and information policies.

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