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AI and the Future of Virginia's Workforce

How artificial intelligence is reshaping jobs, skills, and economic opportunity — and what it means for the Commonwealth

THE BOTTOM LINE Virginia is unusually exposed to both the opportunity and the risk of AI-driven workforce change. The Commonwealth hosts the world's largest data center market, some of the federal government's largest AI contractors, and a 219,000-student community college system that is its most realistic reskilling pipeline. The question for Virginia is not whether AI will reshape work but whether the Commonwealth's investments in forecasting, training, and policy keep pace. Deliberate action now avoids a much harder and more expensive problem in three to five years.

Why It's Moving Fast

Generative AI systems that produce text, images, and code on demand have pushed adoption well beyond the pilot stage. A recent National Academies review finds real but hard-to-predict effects on productivity, job stability, and income inequality, and calls for better data to help workers and policymakers track the shift as it happens. That uncertainty is why this brief is designed to be updated rather than issued once and shelved.

Virginia is not watching from the sidelines. Northern Virginia hosts more than 4,900 megawatts of data center capacity, the world's largest market, anchored by Amazon Web Services, Microsoft, and Google. Amazon alone has committed $35 billion to new data center investment in Virginia. Booz Allen Hamilton, Leidos, SAIC, and dozens of other Northern Virginia-based federal contractors are deploying AI across defense, intelligence, and civil agency missions. Virginia Tech opened its Alexandria Innovation Campus in early 2025, with AI and machine learning as its core focus. The AI economy is already here in Virginia; the workforce question is whether the people who live here can participate in it.

How Jobs Are Changing

- **Displacement and creation:** AI is automating repetitive tasks while creating new roles in AI development, data science, cybersecurity, and data center operations.
- **Skill shifts:** Digital literacy, a working knowledge of AI tools, and adaptability are becoming baseline expectations across occupations, not just technical ones.
- **Human-AI collaboration:** Most roles are being redesigned around people working with AI rather than being replaced by it.
- **Continual learning:** Because tools and workflows keep changing, ongoing training is replacing one-time credentialing as the standard.

Impact Varies by Career Stage

Group	Workforce size	What's needed
Younger workers (18–30)	~37.7 million	Early, hands-on AI fluency to stay competitive from the start of their careers.
Mid-career (30–50)	~70 million	Targeted reskilling to move into AI-augmented versions of existing roles.
Older workers (50+)	~59.3 million	Support transitioning into advisory, mentoring, or AI-assisted roles; hardest group to reskill quickly.

Who Gains, Who's at Risk

Likely to gain	At greater risk
Large employers that can scale automation; high-skilled AI workers; agile startups; federal contractors embedding AI in mission work; consumers gaining convenience and personalization; data center operators benefiting from Virginia's infrastructure lead.	Workers in routine, repetitive roles (retail, customer service, transportation); middle-skill roles such as administrative, accounting, and legal-support work; federal workers and contractors whose tasks are being automated; small businesses without capital to adopt AI.

Workers 50–65 years old face the steepest climb: old enough that retraining is harder to justify economically, yet too far from retirement to wait it out. In Northern Virginia, where federal employment is concentrated, the wave of federal workforce reductions in 2025 has already pushed displaced workers into a tight reskilling market. Left unaddressed, this is the clearest path from AI adoption to widening inequality in the Commonwealth.

Virginia in Focus

The federal contractor workforce

Virginia's federal contractor community — led by Tysons-based Booz Allen Hamilton, Reston-based Leidos ($17B in 2025 revenue), and Reston-based SAIC — is both a major beneficiary and a major point of exposure. Booz Allen alone generates roughly $600 million in annual AI-related federal revenue and employs more than 2,200 AI practitioners. These firms are investing heavily in AI workforce development: Booz Allen's partnership with Workera provides skills assessments and personalized learning plans for its AI staff. Yet the same automation these companies deploy for federal clients is reshaping internal roles, creating displacement pressure within the very workforce building the tools.

Data Center Alley and the jobs question

Northern Virginia hosts the world's largest data center market, with over 4,900 megawatts of capacity as of Q1 2025. Amazon's $35 billion expansion will push that further. But data centers are not labor-intensive in the conventional sense: they employed just 12,140 operational workers in Virginia in 2023, according to the Northern Virginia Technology Council. The opportunity for Virginia workers is not inside the data centers but in the surrounding AI ecosystem: cloud engineering, cybersecurity, AI development, and data analysis roles that require sustained investment in training pipelines to reach workers who are not already technology adjacent.

VCCS as the reskilling backbone

The Virginia Community College System (VCCS), which comprises 23 colleges serving 219,000 students statewide, is the Commonwealth's most realistic reskilling pipeline at scale. Its G3 program (Get A Skill, Get A Job, Get Ahead) provides last-dollar scholarships for low-income students in high-demand fields, including information technology. Northern Virginia Community College (NOVA) has launched NOVAnext, offering tuition-free AI and IT courses for displaced federal workers and contractors. One often underappreciated asset: as VCCS itself notes, a Virginia community college is within 30 minutes of every corner of the Commonwealth — a geographic reach no private training provider can match. The policy question is whether funding and curriculum keep pace with the speed of AI adoption.

Pathways to Reskilling

- **Move into AI-augmented roles:** data analysis, healthcare, and consulting, often through accessible courses (Coursera, Google Analytics, and AWS certifications via NOVA).
- **Build AI literacy without coding:** many tools require no programming background, and platforms like LinkedIn Learning and UiPath Academy focus on practical applications.
- **Strengthen distinctly human skills:** negotiation, leadership, and emotional intelligence remain difficult for AI to replicate, especially in sales, HR, and management.
- **Train for AI in the trades:** robotics, smart manufacturing, and data center operations programs extend AI skills beyond office work.
- **Use Virginia's public programs:** G3 scholarships, NOVAnext, Virginia Works, and IBM SkillsBuild to lower the cost of entry for workers who cannot self-finance retraining.

The Forecasting Gap

Some current estimates suggest AI could add up to 170 million jobs globally by 2030, while as many as 375 million workers may need to change occupations. These figures are not contradictory — new jobs will not automatically be accessible to displaced workers without active investment in aligning skills with emerging roles. The policy challenge lies in the gap between where new work is created and where displaced workers are located, trained, and able to move.

Closing that gap requires better data on actual demand, realistic (not merely aspirational) career pathways, diverse training options accessible to workers who are not already technology-adjacent, and transparent planning for which sectors can genuinely absorb reskilled workers in Virginia's labor market.

How Peer States Are Responding

State	Approach
North Carolina	Major investment in community college AI curriculum through the NC Community College System; Research Triangle employers partnering directly with colleges on curriculum design.
Maryland	Focused AI workforce strategy targeting state government agencies, with explicit reskilling programs for state employees whose roles are being automated.
Texas	Large-scale apprenticeship programs linking community colleges to AI and data center employers; workforce investment tied directly to data center siting incentives.

Singapore	National AI strategy tied explicitly to workforce readiness; SkillsFuture program provides every citizen a training credit usable for AI-relevant courses.

What to Watch

- Whether Virginia's G3 and NOVAnext programs scale quickly enough to reach displaced federal workers, middle-skill workers, and workers outside Northern Virginia.
- Whether the Commonwealth's workforce data systems improve sufficiently to track AI's labor effects in near-real time — currently a significant gap.
- How the Northern Virginia Chamber of Commerce's AI hub roadmap (projecting $90–$150 billion in AI-related economic activity) translates into accessible jobs for workers who are not already in AI.
- State and federal policy responses, including any role for measures that support workers whose occupations are substantially automated before reskilling pipelines reach them.
- Whether job-creation estimates hold up as real adoption data accumulates — the forecasting gap between projections and measured outcomes is itself a policy problem.

About this brief · STEP Briefs are living documents maintained by the STEP Collaborative at George Mason University's Center for Assurance Research and Engineering (CARE) that summarize fast-moving science and technology policy issues for Virginia policymakers and citizens. This brief draws on a National Academies review of AI and the economy, workforce and labor-market data, and the Virginia-specific economic data cited above. It will be revised as new evidence emerges. Next scheduled review: October 2026.

Feedback or corrections: STEPair@gmu.edu · care.gmu.edu/step · TRACE Repository: care.gmu.edu/step-agentic-ai-repository