

AI, RADIOLOGY, AND THE FUTURE OF JOBS

The profession AI was supposed to eliminate is hiring more people than ever — and what that tells us about the future of work.

Prepared by Build American AI for policymakers,
business leaders, the media, and the American public.

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EXECUTIVE SUMMARY

AI DIDN'T REPLACE RADIOLOGISTS. IT MADE THEM MORE ESSENTIAL.

KEY TAKEAWAYS

The clearest decade-long real-world test of artificial intelligence's interaction with work has produced the opposite of the cataclysmic result predicted in 2016. The radiologist workforce, its training pipeline, and the surrounding labor market in imaging informatics have all grown, and the clinical outcomes of AI-supported pathways are better than radiologist-only pathways in the most rigorous trials published to date.

WORKFORCE
GROWTH**+17.3%**

U.S. radiologist
workforce growth, 2014–2023
(Medicare-affiliated practices).

MAYO
CLINIC**+55%**

Mayo Clinic radiology
staff growth since
Hinton's 2016 warning.

FDA AI
DEVICES**723/950**

FDA-authorized AI medical
devices that are radiology tools,
through 2024.

The most-cited prediction of AI-driven job loss has failed on its own timetable. In 2016, Geoffrey Hinton said deep learning would outperform radiologists within five years and that training new ones should stop.¹ By 2025, Hinton had publicly walked back the timeline, conceding his 2016 forecast had been far too aggressive and acknowledging that a combination of AI and radiologists working together was likely the future norm.²

Radiology is the single largest use case for clinical AI, and radiologists are in greater demand than ever. As of the end of 2024, of the 950 FDA-authorized AI/ML medical devices on the U.S. market, 723 are radiology tools.³ Yet the number of radiologists in U.S. Medicare-affiliated practices grew from 30,723 in 2014 to 36,024 in 2023, a 17.3 percent increase.⁴ And the field's trajectory points up, not down. The projected U.S. radiologist supply will be 25.7 percent larger in 2055 than in 2023 if residency positions stay flat, and 40.3 percent larger if they grow — a rise from roughly 37,500 radiologists serving Medicare patients in 2023 to between 47,000 and 53,000 by 2055.⁵

Real-world deployments show augmentation, not substitution is the prevailing trend in radiology. At Northwestern Medicine, generative AI improved radiograph documentation efficiency by 15.5 percent with non-inferior accuracy on the study's pre-specified metrics.⁶ At Cedars-Sinai, AI-assisted pulmonary-embolism workflows cut hospital length of stay by 26.3 percent.⁷ At a Sheba-affiliated trauma center, AI-triaged intracranial hemorrhage cases saw a 36.8 percent relative reduction in 30-day mortality (27.7 percent to 17.5 percent).⁸

AI is doing exactly what technology has done in every prior wave: it is changing tasks, not eliminating purpose. Just as ATMs coincided with more bank tellers, not fewer,⁹ as noted above, AI-assisted imaging coincides with more radiologists, more residency slots, and a new class of imaging-informatics and model-governance roles.

The right policy response is a single national regulatory framework, not a patchwork of conflicting state rules. BAAI calls on Congress to enact a coherent federal framework covering AI literacy, children's safety, voluntary AI training and certification, national AI infrastructure, and baseline safety standards for the most advanced models, with rational federal preemption to preserve a true national market for AI.¹⁰

¹ Geoffrey Hinton, remarks at the Machine Learning and Market for Intelligence conference, 2016. <https://www.youtube.com/watch?v=2HMPRXstSvQ>; <https://radiologybusiness.com/topics/artificial-intelligence/ny-times-revisits-nobel-prize-winners-prediction-ai-will-render-radiologists-obsolete>

² <https://www.nytimes.com/2025/05/14/technology/ai-jobs-radiologists-mayo-clinic.html>

³ <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2841066>

⁴ Harvey L. Neiman Health Policy Institute, "Consolidation Patterns of Practices with Radiologists through 2023" — <https://www.neimanhpi.org/press-releases/consolidation-patterns-of-practices-with-radiologists-through-2023/>.

⁵ Christensen et al., "Projected US Radiologist Supply, 2025 to 2055," JACR 22(2), Feb. 2025 — PubMed.

⁶ Northwestern generative AI reporting study, JAMA Network Open — jamanetwork.com.

⁷ <https://pertconsortium.org/>

⁸ <https://pmc.ncbi.nlm.nih.gov/articles/PMC9411003/>

⁹ <https://www.aei.org/economics/what-atms-bank-tellers-rise-robots-and-jobs/>

¹⁰ Zac Moffatt, "How America Can Thwart China's AI Plan," Newsweek, March 26, 2026. [newsweek.com](https://www.newsweek.com).

PART ONE

THE PREDICTION THAT DIDN'T HAPPEN

How a single 2016 forecast became a cultural reflex — and how a decade of evidence has now reversed it.

In November 2016, Geoffrey Hinton — a foundational figure in deep learning and later a Nobel laureate — stood in front of a conference audience and said something the public took as prophecy: stop training radiologists.¹¹ Within five years, he argued, deep learning would read images better than any human. The headline wrote itself. A high-skill, high-income, seven-year-to-train specialty was about to be obsolete. If AI could do that to radiology, it could do it to anything.

A decade later, the prophecy has not come true and has, instead, inverted. The United States today faces a significant and worsening radiologist shortage.¹² Imaging volumes are (conservatively) rising three to four percent a year.¹³ The number of radiologists has grown, residency slots have grown, technologist employment has grown, and an entire adjacent labor market in imaging informatics and AI oversight has emerged where essentially none existed in 2016. At the Mayo Clinic, the radiology staff has grown by 55 percent since 2016, now numbering more than 400 physicians.¹⁴

Thus, it is no surprise that by 2025, Hinton had publicly walked back the timeline, conceding his 2016 forecast had been far too aggressive and acknowledging that a combination of AI and radiologists working together was likely the future norm.¹⁵

More broadly, the radiology experience is an exemplary case study for how artificial intelligence will actually impact work. It is a live, regulated, high-stakes, decade-long real-world test, and the evidence is on the side of augmentation, not elimination.

¹¹ Geoffrey Hinton, remarks at the Machine Learning and Market for Intelligence conference, 2016. <https://www.youtube.com/watch?v=2HMPRXstSvQ>; <https://radiologybusiness.com/topics/artificial-intelligence/ny-times-revisits-nobel-prize-winners-prediction-ai-will-render-radiologists-obsolete>

¹² American College of Radiology Bulletin, "Radiologist Shortage: A Workforce Update from HPI" (2026). [acr.org](https://www.acr.org).

¹³ Sharon L. D'Souza et al., "Current Perspectives on Radiology Workforce Issues and Potential Solutions," *Diagnostic Imaging*, Mar. 14, 2024, which describes annual increases "of three to four percent in imaging volumes" as "undoubtedly a very conservative estimate." — <https://www.diagnosticimaging.com/view/current-perspectives-radiology-workforce-issues-potential-solutions>

¹⁴ Steve Lohr, "Your A.I. Radiologist Will Not Be With You Soon," *The New York Times*, May 14, 2025. [nytimes.com](https://www.nytimes.com). See also Jon Markman, "The Radiologist Effect," *Forbes*, Jan. 26, 2026. [forbes.com](https://www.forbes.com).

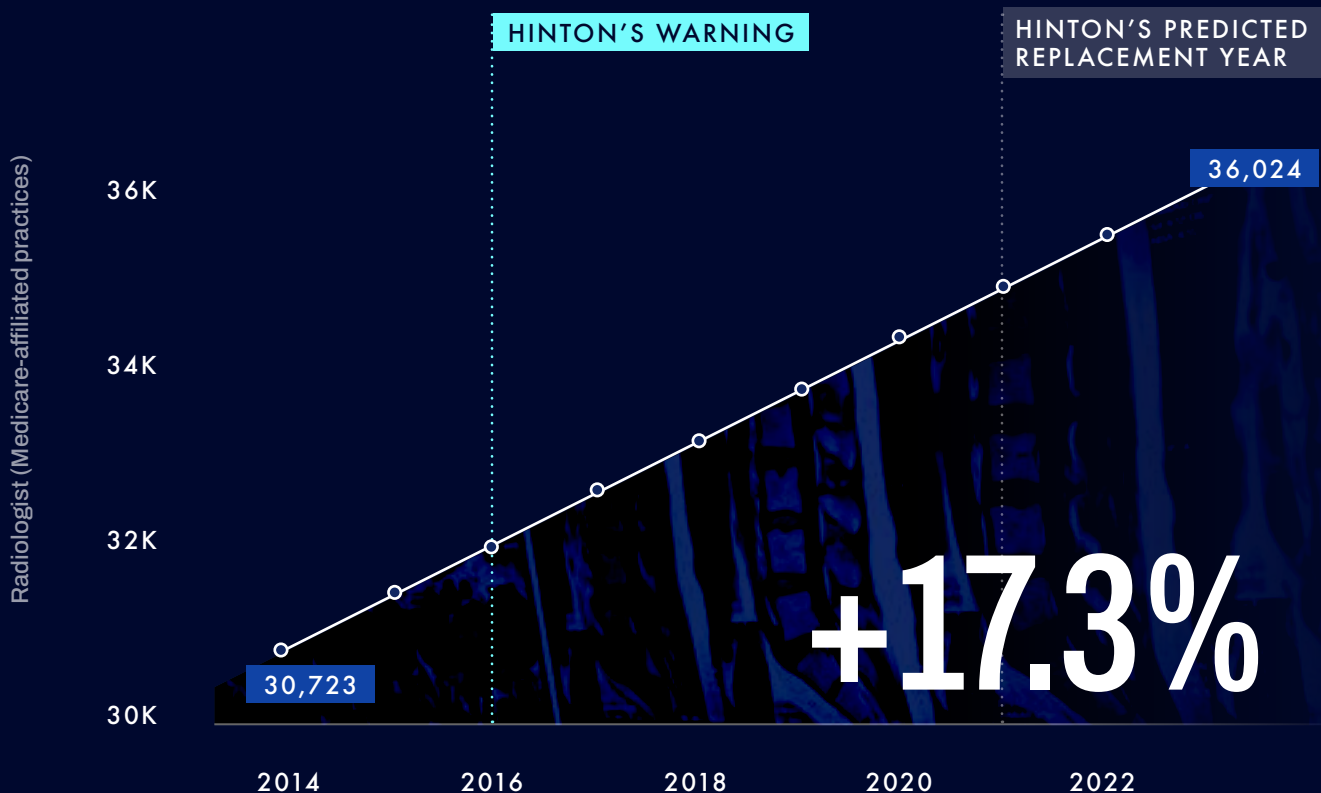
¹⁵ <https://www.nytimes.com/2025/05/14/technology/ai-jobs-radiologists-mayo-clinic.html>

WHAT ACTUALLY HAPPENED

Many of Hinton's operative predictions have been debunked.

US RADIOLOGIST WORKFORCE GREW 17.3% THROUGH THE DECADE AI WAS SUPPOSED TO DISPLACE IT

Figure 1. The U.S. radiologist workforce grew through precisely the window in which AI was supposed to displace it.



Source: Harvey L. Neiman Health Policy Institute, American Journal of Roentgenology

The workforce grew. Radiologists in U.S. Medicare-affiliated practices rose from 30,723 in 2014 to 36,024 in 2023, a 17.3 percent increase, and the increase accelerated through the AI commercialization window.¹⁶

The training pipeline grew. Diagnostic radiology residency positions offered rose from 990 in 2020 to 1,017 in 2024; positions filled rose from 967 to 1,016, an all-time high fill rate (National Resident Matching Program data).¹⁷

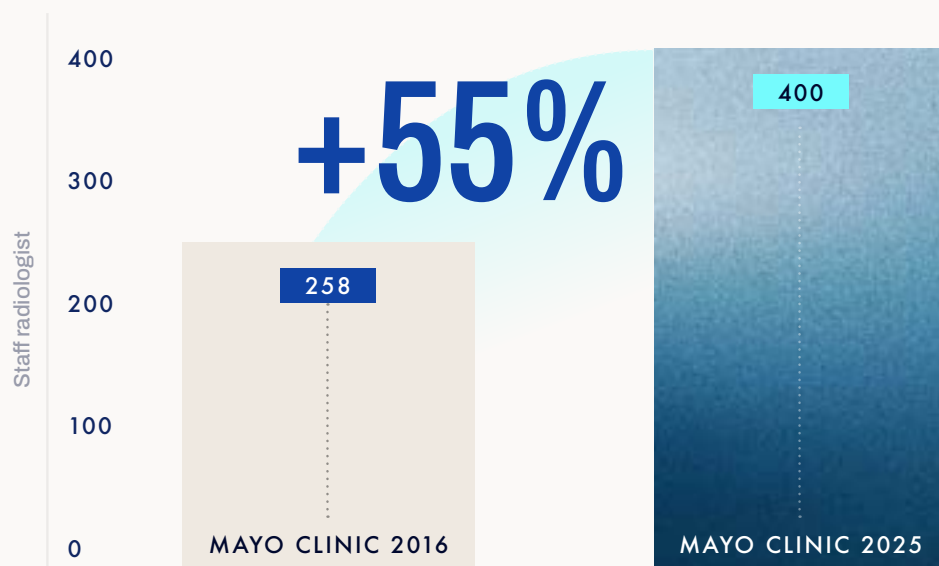
Workforce projections turned sharply upward. The 2025 American College of Radiology (ACR) projection, drawing on companion studies by the Harvey L. Neiman Health Policy Institute, estimates the U.S. radiologist workforce will be 25.7 percent larger in 2055 than in 2023 if residency positions are held constant, and 40.3 percent larger if residency positions expand.¹⁸ If post-COVID-19 attrition persists, the workforce is still projected to be 20.9 percent larger in 2055 than today.¹⁹

Employers doubled down. At the Mayo Clinic, the facility most identified with research-grade AI in radiology, the radiology staff grew 55 percent between 2016 and 2025, exceeding 400 radiologists.²⁰

The shortage is now the dominant concern. For the third consecutive year, AuntMinnie.com ranked workforce shortages as radiology's single greatest threat.²¹

MAYO CLINIC EXPANDED ITS RADIOLOGY STAFF 55% IN THE DECADE AI WAS SUPPOSED TO REPLACE IT

Figure 2. Mayo Clinic, the U.S. health system most identified with AI-assisted imaging, expanded its radiology staff by 55 percent after 2016.



Source: The New York Times. May 14, 2025; Becker's Hospital Review; Forbes, Jan 26, 2026.

¹⁶ Harvey L. Neiman Health Policy Institute, "Consolidation Patterns of Practices with Radiologists through 2023" — <https://www.neimanhpi.org/press-releases/consolidation-patterns-of-practices-with-radiologists-through-2023/>.

¹⁷ <https://www.nrmp.org/wp-content/uploads/2024/03/Advance-Data-Tables-2024.pdf>

¹⁸ Christensen et al., "Projected US Radiologist Supply, 2025 to 2055," JACR 22(2), Feb. 2025 — [PubMed](#).

¹⁹ American College of Radiology Bulletin, "Radiologist Shortage: A Workforce Update from HPI" (2026). [acr.org](#).

²⁰ Steve Lohr, "Your A.I. Radiologist Will Not Be With You Soon," The New York Times, May 14, 2025. [nytimes.com](#). See also Jon Markman, "The Radiologist Effect," Forbes, Jan. 26, 2026. [forbes.com](#).

WHY THE PREDICTION MISSED

The 2016 argument rested on a technical benchmark: AI could label images. Radiologists do many things with images, but labeling is only one of them. They determine protocol appropriateness, integrate patient history, arbitrate diagnostic uncertainty, communicate findings to referring physicians, contribute to multidisciplinary tumor boards, supervise contrast and interventional workflows, and carry medicolegal responsibility for every report they sign.

A 2024 SURVEY OF THE
EUROPEAN SOCIETY OF
RADIOLOGY FOUND THAT:

48%

of respondents believed
patients would not accept AI-
only reports.²²

***THE PREDICTION MISSED
BECAUSE IT MISUNDERSTOOD
THE JOB. IT ASSUMED THE TASK
WAS THE JOB.***

There is a deeper reason the forecast missed, and it is not unique to radiology. The people best equipped to see what a technology can do are rarely the people best equipped to see how fast it will arrive. Expertise in advancing a technology, such as training a better model or clearing a new benchmark, is a different thing than understanding how that technology diffuses through hospitals, regulators, payment systems, and professional norms.

A researcher who has solved the technical problem can be forgiven for assuming the implementation problem will solve itself. It rarely does. General-purpose technologies, from the electric motor to the computer, have consistently delivered their economy-wide gains only after a long lag and once the complementary investments and organizational changes they require are finally in place. AI is following the same path: capability has advanced far faster than the workflow redesign, reskilling, and institutional trust needed to turn it into changed work.

²¹ <https://www.auntminnie.com/practice-management/article/15737311/hpi-radiologist-supply-imaging-demand-will-contribute-to-future-workforce-shortage>

²² Surveys, payments, labor statistics. MASAI trial — [Lancet, 2026](#); European Society of Radiology 2024 AI survey — PMC; Bipartisan Policy Center, [Paying for AI in U.S. Health Care \(2026\)](#); BLS OOH and Data Scientists; Residency Programs List; Diagnostic Imaging.

PART TWO

AI AS CAPACITY MULTIPLIER

Radiology was one of the first fields to put machine learning into real clinical use, which gives it something most of the AI debate still lacks: a long track record. The deployments here aren't projections — they've been running for years in tertiary academic centers, community hospitals, and national screening programs, with peer-reviewed outcomes.

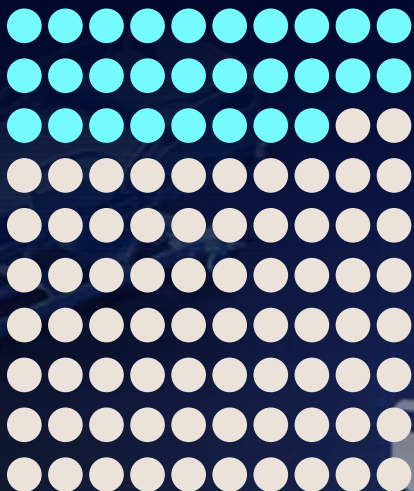
AMONG 100 PATIENTS WITH A BRAIN BLEED, HOW MANY DIED WITHIN 30 DAYS

Intracranial-hemorrhage cases triaged by AI at a Sheba-affiliated trauma center

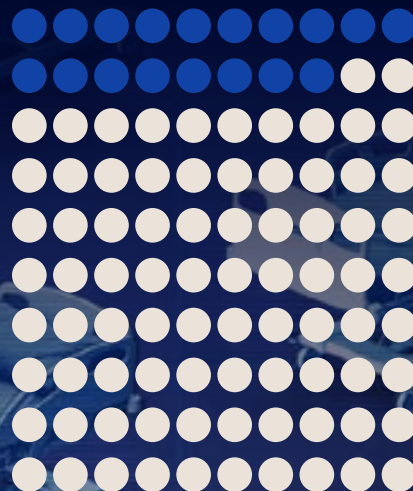
10 fewer deaths per 100 patients

30-day mortality 27.7% to 17.5% ($p=0.004$)

BEFORE AI TRIAGE



WITH AI TRIAGE



SITE	AI APPLICATION	EFFECT ON WORK	OUTCOME
Northwestern Medicine	Generative AI draft radiograph reporting and pneumothorax flagging	Documentation time down 15.5%; radiologist remained the final reader	No significant difference in clinical accuracy or report quality vs. unassisted reads; AI also flagged unexpected pneumothorax at 72.7% sensitivity / 99.9% specificity
Cedars-Sinai	AI work-list triage for PE and thrombectomy	AI triage sped PERT activation; radiologist still interprets	Total hospital stays cut ~18–23%; ~\$504K/yr saved across 48 thrombectomy patients ²³
Sheba trauma center	AI triage for intracranial hemorrhage	Critical cases reprioritized for faster review	30-day mortality 27.7% → 17.5% (p = 0.004) ²⁴
MASAI trial — Sweden	AI triages exams to single vs. double reading + detection support	Radiologist reading workload down 44% ²⁵	Higher sensitivity (80.5% vs 73.8%) at the same specificity; fewer aggressive interval cancers; no rise in false positives ²⁶
MaMMa Klinika	AI as additional reader in breast screening	AI's additional-reader flags sent ~7% of cases to human arbitration, which caught extra invasive cancers	Cancer detection +5% at scale (live use); larger gains, up to +13%, in earlier pilots at a more sensitive threshold ²⁷
Hoag Hospital	AI-enhanced PET acquisition	Same machines, ~4× the throughput: more patients scanned per day, shorter appointments	PET acquisition cut from 18 to 4.5 minutes ²⁸

Several patterns cut across the cases. **First, AI consistently took the first pass** — drafting reports, flagging abnormalities, prioritizing worklists, and accelerating image acquisition — while the final read, the diagnosis, and the medicolegal responsibility stayed with the radiologist. This is precisely the division of labor that economists have long expected from capable automation: when a tool absorbs the routine, codifiable part of a job, it tends to raise the value of the judgment, integration, and accountability that remain human, rather than render them redundant.²⁹

Second, the clinical gains showed up downstream of the AI itself — shorter hospital stays, faster escalation of critical cases, earlier and more sensitive cancer detection, reduced documentation friction, and, in the most acute setting, lower mortality. The model rarely produced the benefit on its own. It produced it by getting the right case to the right human faster, or by freeing the human to spend attention where it mattered most.

Third, the organizational response to that new efficiency was not to shed specialists but to redeploy scarce specialist time. Faster scans meant more patients per scanner, not fewer technologists; triage meant urgent cases read sooner, not fewer radiologists; single-reading in screening let the same workforce cover more volume. That mirrors what large-scale labor studies find outside medicine: where AI raises productivity, firm-level employment tends to rise rather than fall, as the gains expand what the organization can take on.³⁰

Fourth, the human role tended to move up, not out — toward the clinical, integrative, and oversight work that radiologists themselves expect AI to expand rather than eliminate.

²³ https://pertconsortium.org/wp-content/uploads/2024/08/Mizraki_Cost-Effectiveness-Analysis-of-AI-Driven-PulmonaryEmbolism-Response-Team-Activatio-in-Mechanical-Thrombectomy.pdf

²⁴ <https://link.springer.com/article/10.1186/s12245-023-00523-y>

²⁵ [https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045\(23\)00298-X/abstract](https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(23)00298-X/abstract)

²⁶ <https://www.prnewswire.com/news-releases/the-lancet-publishes-final-results-from-the-first-randomized-controlled-trial-in-breast-ai-302675094.html>

²⁷ <https://www.nature.com/articles/s41591-023-02625-9>

²⁸ <https://www.hoag.org/articles/hoag-becomes-first-in-the-country-to-use-ai-powered-pet-scans-to-improve-patient-care>

²⁹ <https://www.aeaweb.org/articles?id=10.1257/jep.29.3.3>

³⁰ Philippe Aghion et al., “How Different Uses of AI Shape Labor Demand: Evidence from France,” AEA Papers and Proceedings 115 (2025): 62–67, doi.org/10.1257/pandp.20251047. Using French firm-level data, the authors find AI adoption is positively associated with firm employment and sales, with the productivity effect outweighing displacement even for occupations expected to be displaced.

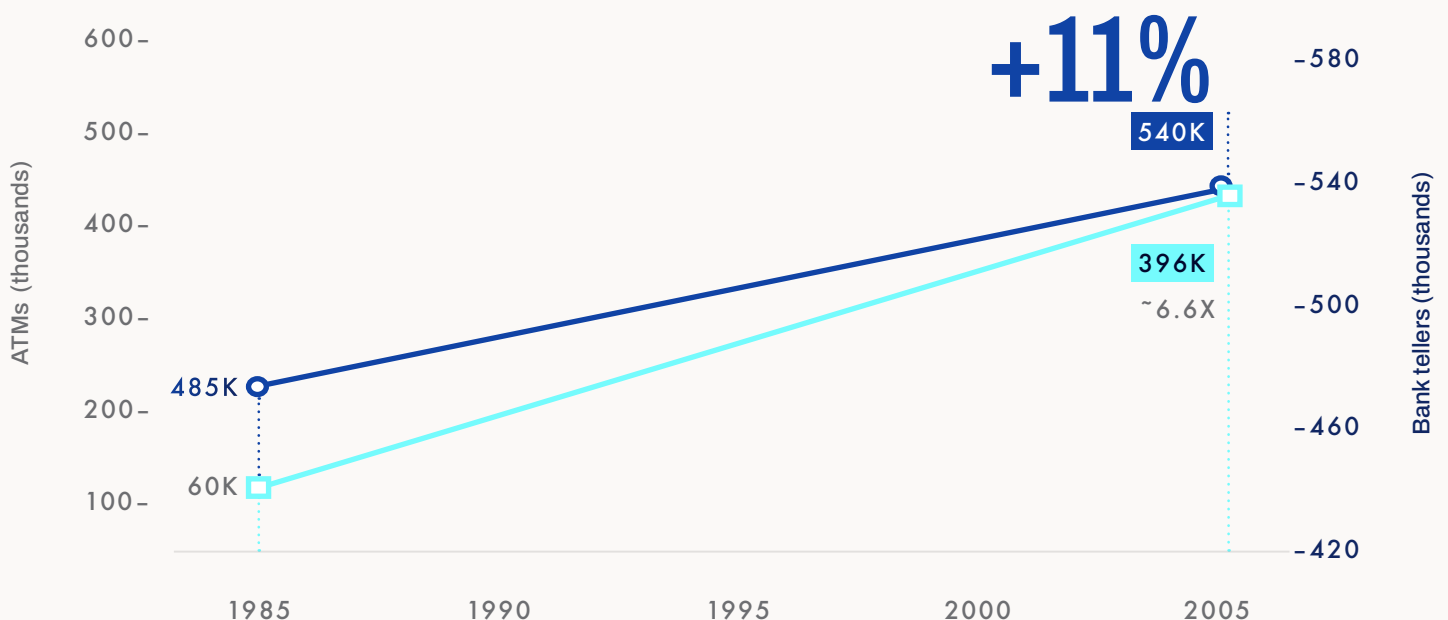
PART THREE

TECHNOLOGY TRANSFORMS WORK, IT DOESN'T END IT

The radiology experience is not an exception. It is consistent with a long pattern in which labor-saving technology is assumed to destroy jobs and instead reshapes them, often expanding employment in the very occupation that was supposed to disappear.

Figure 4. U.S. ATMs and bank tellers both rose from 1985 to 2005: the precedent for what we are seeing in radiology today.

THE ATM PRECEDENT: AUTOMATION MULTIPLIED, YET TELLER EMPLOYMENT STILL ROSE



Source: James Bessen, Boston University, Learning by Doing (2015); AEI summary. 1985 and 2005 endpoints shown.

ATMS AND BANK TELLERS

The canonical illustration is the automated teller machine. In 1985, the United States had about 60,000 ATMs and roughly 485,000 bank tellers. By 2005 it had nearly 400,000 ATMs and roughly 540,000 tellers.³¹ ATMs reduced the number of tellers required per branch from roughly 21 to 13, which made branches cheaper to operate, so banks opened more of them.³² The teller's job changed from cash handling to customer relationships, sales, and service recovery. Tellers became *more* skilled and *more* numerous at the same time.³³

POWER LOOMS, AVIATION, SOFTWARE, AND BEAN COUNTING

The pattern is older than the ATM, and there is no shortage of other examples:



After its invention in 1785, the power loom was expected to eliminate handweavers. Yet, while power looms automated away most of the labor in weaving — by one estimate, 98 percent of the work needed per yard of cloth — the number of weaving jobs grew through the nineteenth century, as cheaper cloth expanded demand faster than machines could absorb it.³⁴



Likewise, autopilot was supposed to make pilots redundant; instead the airline industry faces a pilot shortage, with the workforce still growing and airlines projected to need hundreds of thousands of new pilots in the coming decades.³⁵



Perhaps most striking in the current context, IDEs, compilers, and version control were supposed to eliminate programmers; yet, software development has been one of the fastest-growing occupations, with employment still projected to grow far faster than average.³⁶



Accountants tell the same story. When VisiCalc shipped in 1979 as the first electronic spreadsheet, observers warned that automation would empty the back office. Instead, the spreadsheet unlocked latent demand for financial analysis. The accounting profession expanded through the 1980s, the largest firms grew their revenue base, and the occupation has continued to grow ever since.³⁷ The tool didn't replace the accountant. It expanded what an accountant could do, and the market paid for more of it.

These episodes are not a string of coincidences. They share a mechanism, and one of the economists who has done the most to formalize it is David Autor of MIT, a contributor to the National Academies' 2024 consensus study on AI and the future of work. Autor's central insight is that an occupation is not a single task but a bundle of them — and that the value of the bundle depends on the judgment, context, and human relationships that hold it together.³⁸

When a machine absorbs the routine, codifiable tasks in that bundle, it rarely hollows out the job; more often it raises the value of the tasks that remain — the ones demanding expertise, accountability, and discretion. The teller who no longer counts cash becomes a relationship manager; the weaver who no longer throws the shuttle tends a dozen looms; the accountant freed from arithmetic sells judgment.

Autor notes that even "medical support occupations — radiology technicians, phlebotomists, nurse technicians" form a significant and rapidly growing, relatively well-paid middle-skill category, precisely because technology made each worker more productive rather than expendable.³⁹

The same logic now governs the radiologist. AI can take the first-pass measurement, the flag, the draft. What it cannot take is responsibility for the decision — and as the routine work is automated, that responsibility, and the expert who carries it, grows more valuable, not less.

³¹James Bessen, *Learning by Doing: The Real Connection between Innovation, Wages, and Wealth* (Yale University Press, 2015) — Yale. Lora Kolodny, "These robots handle dull and dangerous work humans do today — and can create new jobs," CNBC, Oct 9, 2018 — [cnbc.com](https://www.cnbc.com). Summary of ATM-and-teller employment data at AEI; <https://fred.stlouisfed.org/series/USAFACACNUM>

³²<https://www.aei.org/economics/what-atms-bank-tellers-rise-robots-and-jobs/>

³³See, e.g., James Bessen, "How Computer Automation Affects Occupations: Technology, Jobs, and Skills," Boston Univ. School of Law, Law & Economics Working Paper No. 15-49 (2016), ssrn.com/abstract=2690435. Modeling occupations as bundles of tasks, Bessen finds computer automation can raise within-occupation employment even as it shifts the skills demanded.

³⁴<https://www.imf.org/external/pubs/ft/fandd/2015/03/bessen.htm>

³⁵<https://www.bls.gov/ooh/transportation-and-material-moving/airline-and-commercial-pilots.htm>; <https://www.boeing.com/commercial/market/pilot-technician-outlook>

³⁶See, e.g., <https://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>; <https://www.bls.gov/ooh/math/data-scientists.htm>

³⁷VisiCalc release and accountant-profession growth: BLS OOH — Accountants and Auditors; ACCA, "Accounting tech's rollercoaster ride" (2025).

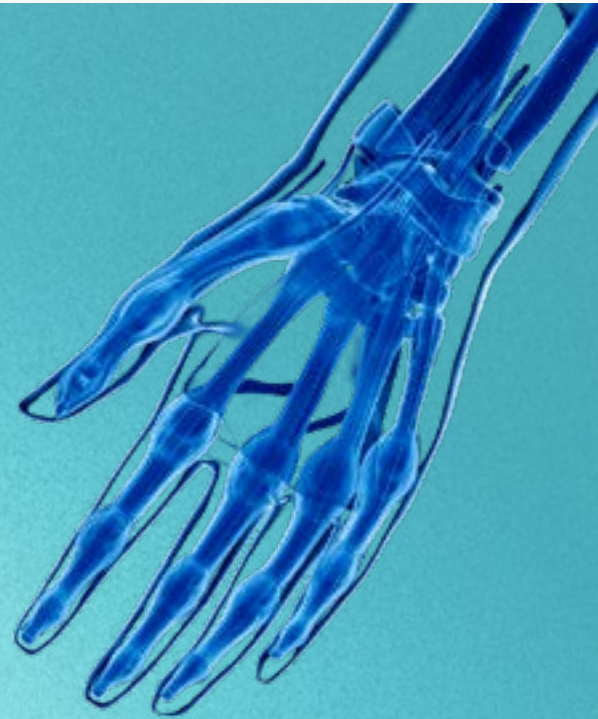
³⁸<https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.29.3.3>

³⁹*Id.*

PART FOUR

WHAT AI ACTUALLY CHANGES

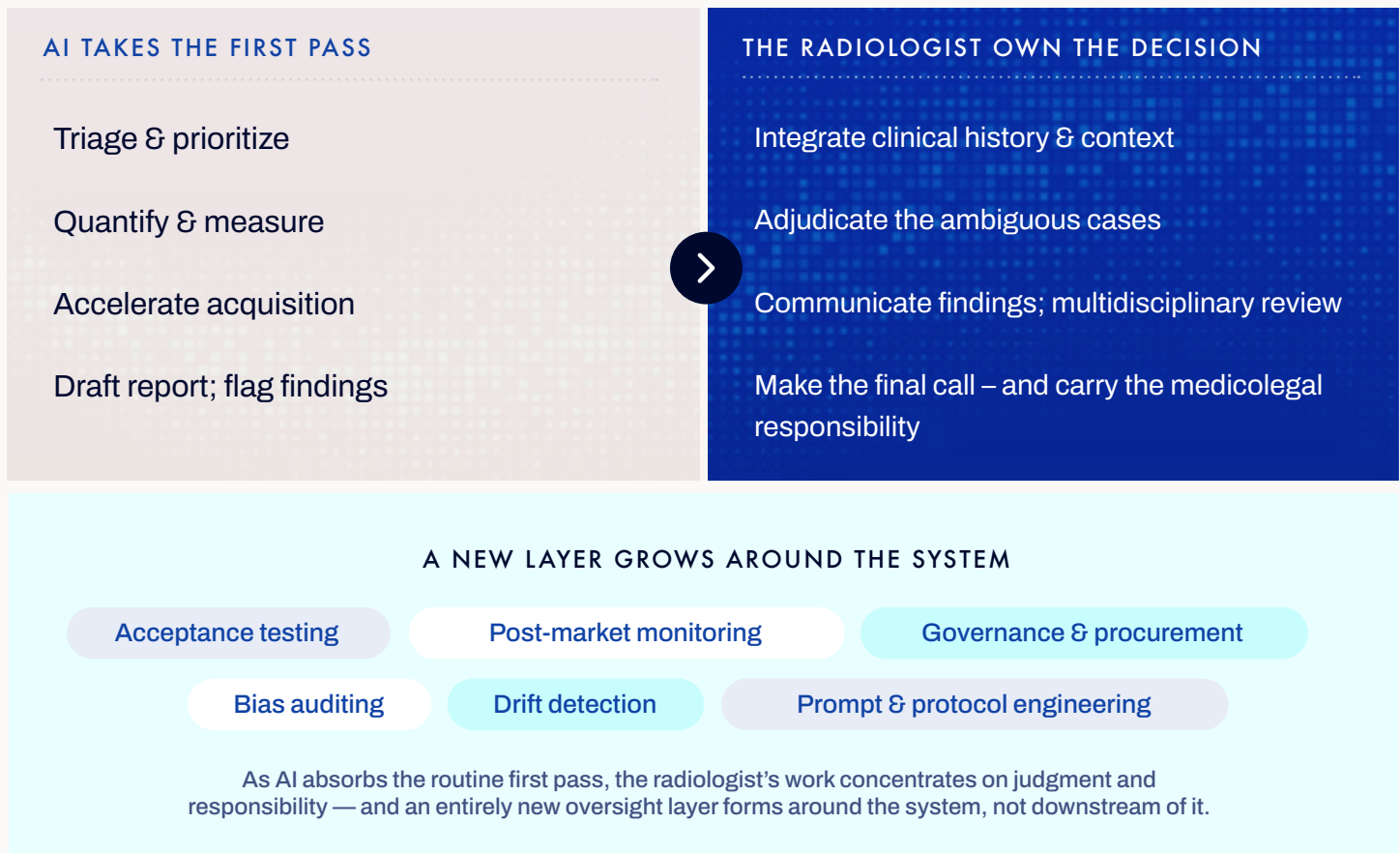
AI CHANGES WHAT WORKERS DO DURING THE DAY. IT DOES NOT CHANGE WHY THE WORK EXISTS.



A radiologist exists to make the most accurate diagnosis possible for a patient whose next step in care depends upon it. Whether the first-pass review is performed by a radiologist or by a supervised AI model is a detail of workflow. The purpose is the same. The responsibility is the same. The person who carries the purpose and the responsibility is still the radiologist.

In the 2024 European Society of Radiology survey, 44.8 percent of respondents said AI would make the radiology team's duties *more clinical*, and 36.4 percent said *more technical*.⁴⁰ Nearly all respondents (97.7 percent) believe the radiology team will play a role in the development and validation of AI applications.⁴¹

THE TASK MAP, REDRAWN



The clearest sign that AI is adding to radiology rather than subtracting from it may be the entirely new category of work that has grown up around the technology — roles that barely existed when Hinton issued his warning, and that the profession's own institutions are now racing to staff. The American College of Radiology runs a dedicated Informatics Fellowship⁴²; the Radiological Society of North America offers a multi-track Imaging AI Certificate⁴³; and Mayo Clinic⁴⁴, Penn⁴⁵, and Emory⁴⁶ have each established imaging-informatics fellowships to train a kind of specialist the field scarcely needed a decade ago — one fluent in both the reading room and the model.

The official statistics have not caught up: the Bureau of Labor Statistics does not yet track imaging informatics as a distinct occupation, but its closest national proxy, the data scientist, is projected to grow 34 percent between 2024 and 2034, among the fastest rates of any occupation in the country⁴⁷. The growth runs the full length of the skill ladder — the technical layer that builds, validates, and governs the models, and the clinical layer that puts them to use. AI did not thin the ranks of radiology; it created new ones.

⁴⁰ <https://pmc.ncbi.nlm.nih.gov/articles/PMC11458846/>

⁴¹ Id.

⁴² <https://www.acr.org/data-science-and-informatics/Informatics>

⁴³ <https://www.rsna.org/ai-certificate>

⁴⁴ <https://college.mayo.edu/academics/residencies-and-fellowships/radiology-informatics-and-artificial-intelligence-fellowship-minnesota/>

⁴⁵ <https://www3.pennmedicine.org/departments-and-centers/departments-of-radiology/education-and-training/residency-programs/special-resident-programs/imaging-informatics-fellowship>

⁴⁶ <https://med.emory.edu/departments/radiology/education/fellowships/imaging-informatics.html>

⁴⁷ <https://www.bls.gov/ooh/math/data-scientists.htm>

PART FIVE

TRANSFORMATION IS NOT PAINLESS

A credible case for AI's labor effects has to acknowledge what the data genuinely shows: transformation is real, and it is rarely costless. Three observations belong in any honest version of this argument.

DIFFERENT OCCUPATIONS WILL SEE VARYING LEVELS OF CHANGE.

Medical transcription, language translation, and some entry-level coding tasks have already been significantly reshaped by AI. Even when net employment holds, the workers who take new jobs are typically not the same people displaced from old ones. That is a real transition cost, and it deserves real policy.⁴⁸

PRACTICE STRUCTURE IS CHANGING EVEN WHEN EMPLOYMENT IS RISING.

U.S. radiology practices consolidated from 5,059 in 2014 to 4,313 in 2023, with the average practice growing from 9.7 to 17.9 radiologists.⁴⁹ Consolidation is not labor destruction, but it changes how work is organized and has real implications for rural access and independent practice.

PAYMENT HAS NOT KEPT PACE WITH CAPABILITY.

As of January 2026, only 26 CPT codes existed for clinical AI solutions, and only three AI solutions carried Category I CPT codes.⁵⁰ The gap between what AI can do and what payers reimburse for has trapped many promising pilots in grant-funded limbo, and health systems that cannot bill for AI cannot staff to scale it.

***THE APPROPRIATE RESPONSE IS NOT FEAR.
IT IS PREPARATION.***

⁴⁸Gustavo de Souza, "Artificial Intelligence in the Office and the Factory: Evidence from Administrative Software Registry Data," Federal Reserve Bank of Chicago Working Paper 2025-11 (2025), doi.org/10.21033/wp-2025-11. Using Brazilian software-registry data, de Souza finds AI reduces some office employment while raising production employment, for a net employment increase—an illustration of displacement and complementarity operating together. ; "The AI Jobs Panic Is Still Waiting on the Evidence," Int'l Center for Law & Economics (May 2026), laweconcenter.org. Argues displacement evidence remains thin, while noting that younger workers entering some professions face genuine pressure—consistent with the uneven transition costs described here.

⁴⁹<https://www.neimanhpi.org/press-releases/consolidation-patterns-of-practices-with-radiologists-through-2023/>

⁵⁰Bipartisan Policy Center, [Paying for AI in U.S. Health Care](#) (2026);

PART SIX

PREPARING THE WORKFORCE

The radiology case study points to a clear conclusion: when AI enters a profession, the workers who thrive are the ones whose employers, schools, and policymakers prepared them to use it. Build American AI's national framework outlines where that preparation should focus. Three of BAAI's five pillars speak directly to the workforce and education side of the AI economy.⁵¹

BROAD AI LITERACY

A substantial majority of Americans should have a working understanding of AI within the next decade, supported by federal partnerships with K–12 systems, community colleges, universities, and workforce programs.

A NATIONAL AI TRAINING AND CERTIFICATION INITIATIVE

Voluntary, portable credentials for workers in high-impact sectors (healthcare, manufacturing, and education chief among them) so that frontline professionals can use AI tools confidently and safely. The ACR Informatics Fellowship and the RSNA Imaging AI Certificate are live templates for what this looks like in one specialty; similar pathways are needed across the economy.

NATIONAL AI INFRASTRUCTURE

Large-scale compute capacity built on federal land with private-sector cost-sharing, so U.S. workers, researchers, and employers have the tools to compete globally.

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Beyond these pillars, a serious workforce agenda will also require **education reforms**: updating curricula from high school through graduate and professional training so students encounter AI as a tool they learn *with*, not an abstraction they learn *about*, along with continued investment in **apprenticeships, mid-career retraining, and employer-led upskilling**. The ATM-era lesson applies: the workers who did best were the ones whose employers retrained them for the new, higher-value parts of the job. The radiology-era lesson is the same, just faster.⁵²

CONCLUSION

THE OPPOSITE OF WHAT HINTON PREDICTED

In 2016, one vision of AI's effect on work became a cultural reflex: a high-skill job would be gone in five years; others would follow; prepare for mass displacement. That vision has not been borne out by the specialty held up as its clearest example.

Radiologists in the United States are more numerous, better supported by technology, and more in demand than they were a decade ago. The Mayo Clinic, the institution most often cited as evidence for what AI-era radiology looks like, has grown its radiology staff by roughly 55 percent since 2016. Imaging technologist employment is up, residency training is up, projected workforce supply is up, and an entirely new class of imaging-informatics and AI-governance jobs has been created. The clinical outcomes of AI-plus-radiologist pathways are better than those of radiologist-only pathways in the most rigorous trials published to date.

This is not an accident, and it is not unique to medicine. It is how technology has always interacted with high-value work: it absorbs the narrowest tasks, it multiplies the capacity of the expert, and it creates a demand for new forms of expertise around itself.

⁵¹Zac Moffatt, "How America Can Thwart China's AI Plan," Newsweek, March 26, 2026. [newsweek.com](https://www.newsweek.com)

⁵²World Bank, World Development Report 2019: The Changing Nature of Work (Washington, DC: World Bank, 2019), doi.org/10.1596/978-1-4648-1328-3. Argues technological change reshapes the demand for skills and calls for lifecycle investment in human capital and a strengthened social contract.

AI WON'T TAKE YOUR JOB. BUT SOMEONE USING AI MIGHT—AND SOMEONE PREPARING WORKERS TO USE AI CERTAINLY WILL SHAPE WHO THRIVES.

The policy choice, in radiology and everywhere else, is whether to prepare workers for the augmented economy or to manage their decline into it. The evidence says the first path works. The second path, the prophecy of 2016, is already a decade out of date.

The optimistic case for AI and jobs is not a matter of faith. It is a matter of reading the evidence as it is. Radiology is telling us how this story ends. It is time to listen.

Every prior wave of automation, from the power loom to the spreadsheet, over time raised the ceiling on what people could accomplish. AI will do the same, only faster: it will increase the rate of human progress.

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