

AI Diffusion in the United States

Executive Summary

AI is becoming one of the most consequential general-purpose technologies of our time. Nearly 18% of the world's working-age population and 31% of the United States' working-age population are now using AI. **[1]**

For the first time, we can look below the national level to see how AI usage varies across American states and counties. **[2]** What we observe is that AI adoption is spreading quickly, but not evenly. Three patterns stand out: the divide between urban and rural communities, the college town effect, and the importance of the local job base.

At the state level, AI usage is highest in places with large metropolitan economies, strong suburban access, major universities, and concentrations of knowledge-intensive work. Maryland, Utah, Texas, Virginia and New Jersey lead the rankings, reflecting regional concentrations, such as Utah's Salt Lake City-Provo corridor and the Washington, D.C. metro area. States with lower levels of AI usage tend to have fewer large metro centers and larger rural or small-town populations.

At the county level, the urban-rural divide stands out most clearly. In this report, we group counties into three types based on the USDA's Rural-Urban Continuum Codes (RUCC). **[3]** Metropolitan areas are larger cities and their surrounding communities, typically anchored by an urban core of 50,000 or more people. Micropolitan areas are smaller cities (5,000–50,000 people) that serve as economic centers for surrounding communities. Rural areas are places outside both metropolitan and micropolitan areas, generally more remote and less densely populated. Metropolitan counties have an average AI user share of 32.9%, more than twice the 16.2% average in rural counties. Micropolitan counties fall between the two at 21.8%. These differences likely reflect several factors that often reinforce one another, including variation in digital infrastructure; the concentration of information, management, finance jobs and young-adult populations in metropolitan areas; and differing levels of trust in AI.

The data also shows the strong impact of college-aged populations. Counties where more than 10% of residents are between ages 18 and 24 have an average AI User Share of 28.6%, compared with 20.3% in counties with smaller shares of this age group. Williamsburg, Virginia has the highest AI User Share in the country at 73.2%. As a small city with a highly concentrated student population at the College of William and Mary, it also has one of the nation's highest proportions of residents ages 18 to 24. This points to a broader trend: younger Americans are adopting AI at higher rates than older age groups, even after accounting for differences between urban and rural counties.

The local job base adds another important layer. Counties with larger shares of professional and technical services, information work, health care, and finance tend to have higher AI usage. Counties with larger shares of manufacturing, agriculture, construction, and mining tend to have lower AI usage. These patterns do not prove that any single industry causes higher or lower adoption. But they do show that the structure of a local economy is closely associated with how quickly AI is being adopted.

Taken together, these findings show that AI diffusion in the United States is broad, but uneven. It is moving fastest in places with strong digital infrastructure, younger populations, and knowledge-intensive economies. It is moving more slowly in many rural and small-town communities. As AI becomes a more important tool for work, education, and economic opportunity, understanding these differences will be important to helping more communities benefit from the next wave of technological change.

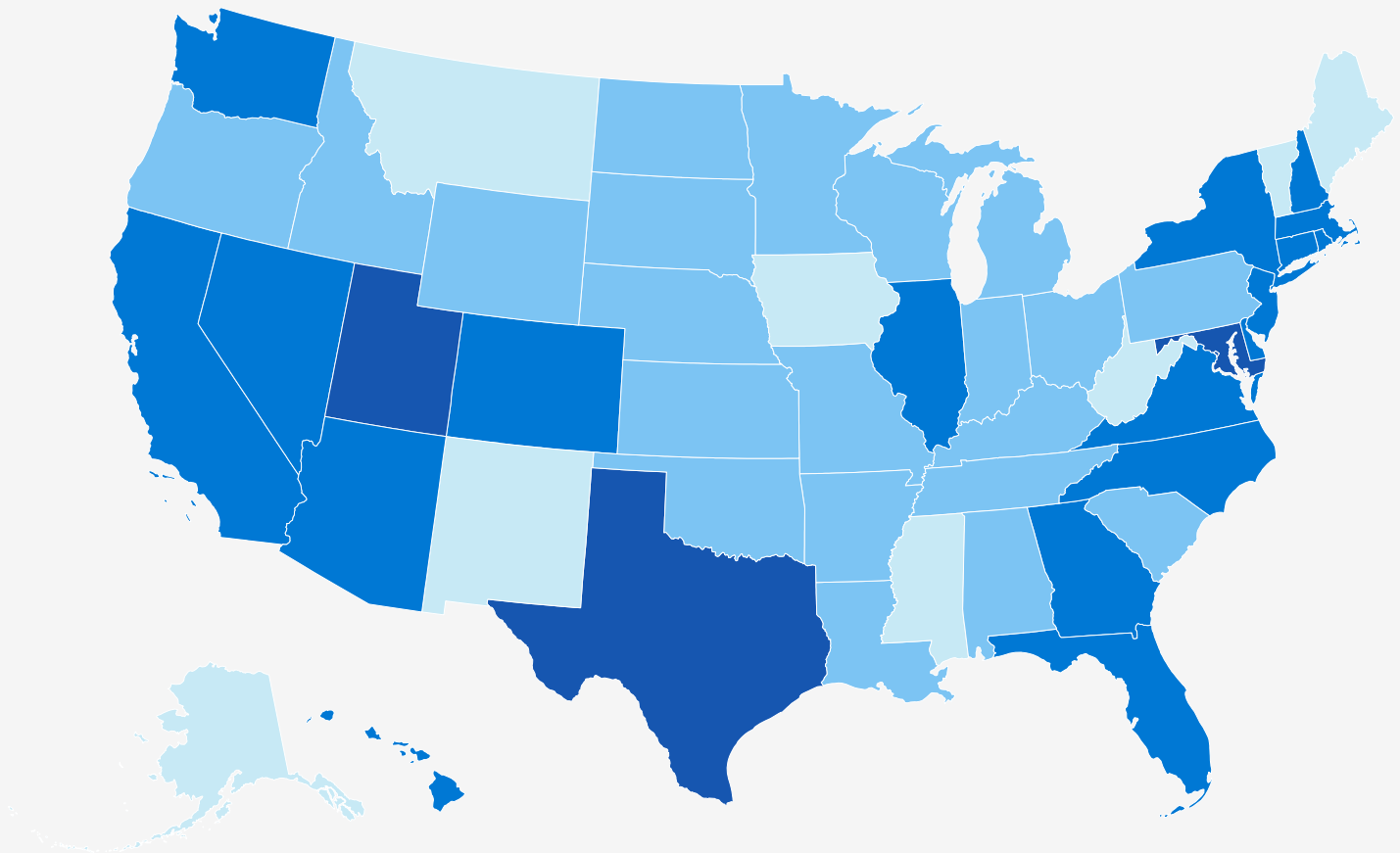
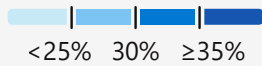
The National Leaderboard

To understand how AI reaches people and communities, it is important to look beyond the national AI adoption percentage and examine at both state and local levels. This report evaluates AI usage across all 50 states and 3,143 counties and county equivalents in the United States.

AI usage is highest in Maryland, Utah, Texas, Virginia and New Jersey. States with lower levels of AI usage include West Virginia, Maine, Montana, Mississippi, and Vermont.

These states tend to have smaller metropolitan footprints, older populations, and larger rural or small-town shares. This state-level picture is useful, but it is only the first layer. Patterns become clearer at the county level, where differences between metropolitan areas, rural communities, and college towns come more sharply into view.

AI adoption across U.S. states



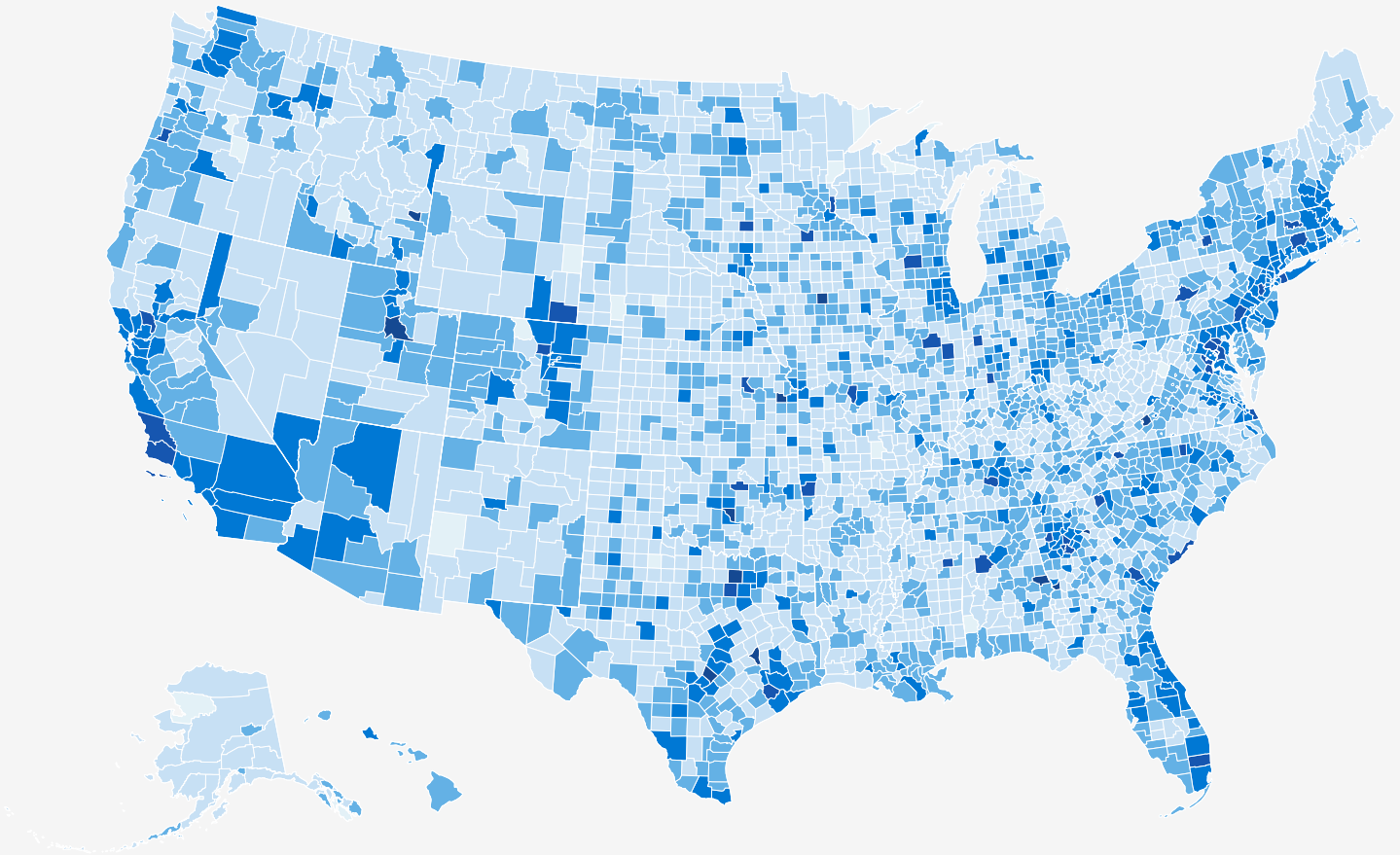
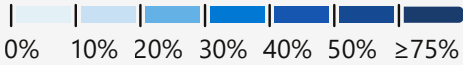
The Urban-Rural Divide

AI usage is significantly concentrated around large metropolitan areas, technology corridors, and university-centered communities.

Metropolitan (>50,000 people) counties have an average AI User Share of 32.9%, compared with 21.8% in micropolitan (5,000–50,000 people) counties and 16.2% in rural counties.

Because most Americans live in metropolitan counties, these areas shape the national picture. Rural counties account for 3.0% of the population, which means their experience can be easy to miss in national averages even when the gap is large. It's critical, however, to not overlook the gap between urban and rural counties and why that divide exists.

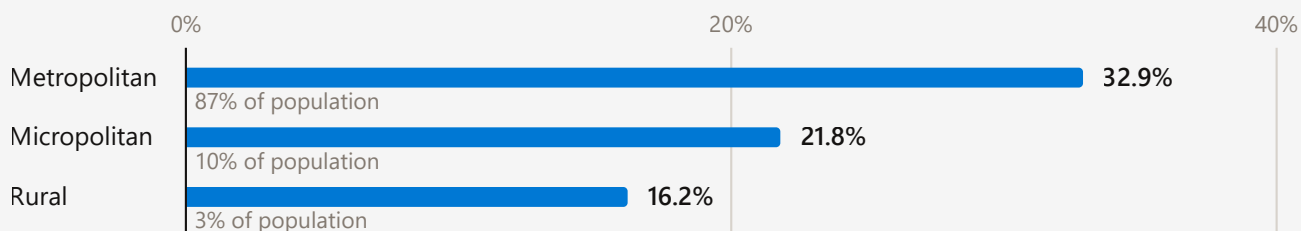
County AI user share map



Several factors appear to be contributing, including differences in access and trust. Urban counties generally have greater access to devices and reliable internet, [4] [5][6] a difference reflected in this report’s technology access factor. But access explains only part of the divide. Metropolitan counties also tend to have larger young-adult populations and greater concentrations of technical, information, management, and finance jobs, which are associated with higher rates of AI use.

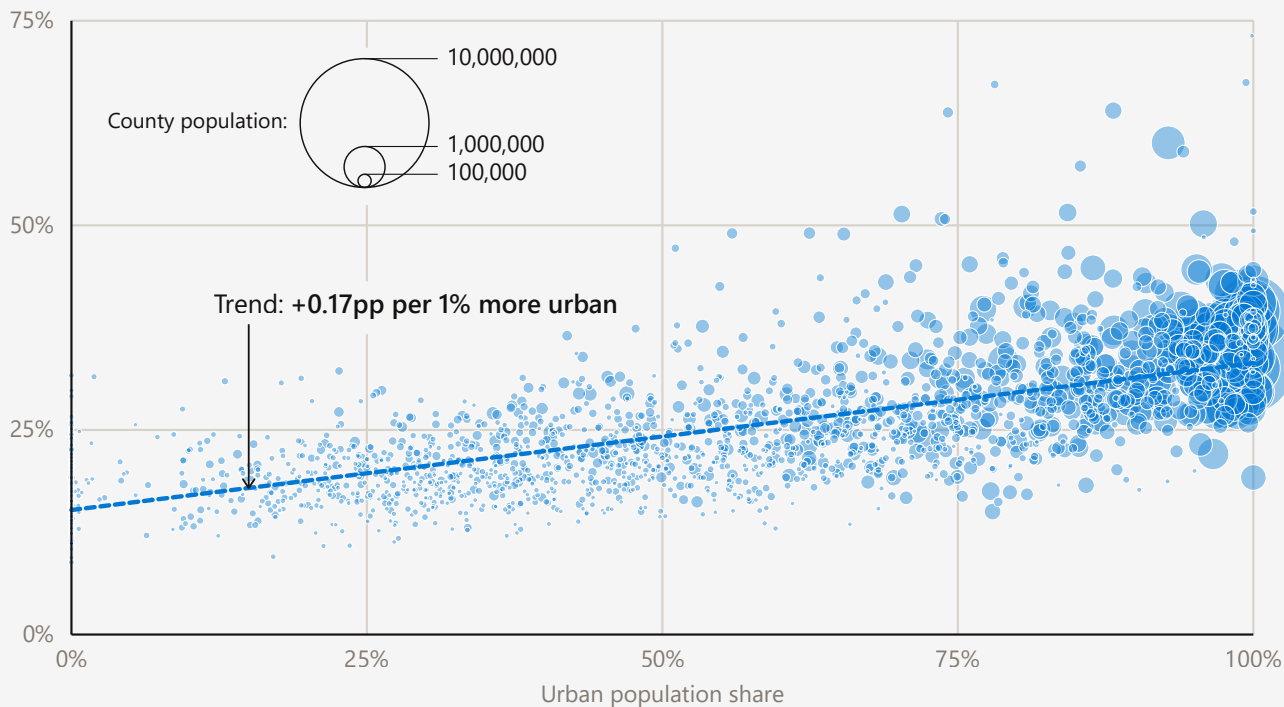
Trust also appears to play an important role. When asked whether AI was likely to act in the best interest of the public, 53% of respondents in urban areas responded positively, compared to only 38% in rural areas. [7] Similar patterns appear for opinions on whether companies will use AI responsibly, trust in news from AI sources, and on being able to recognize content created by AI.

AI adoption increases with urbanization



AI user share by county urbanization

AI user share



The College-Town Effect

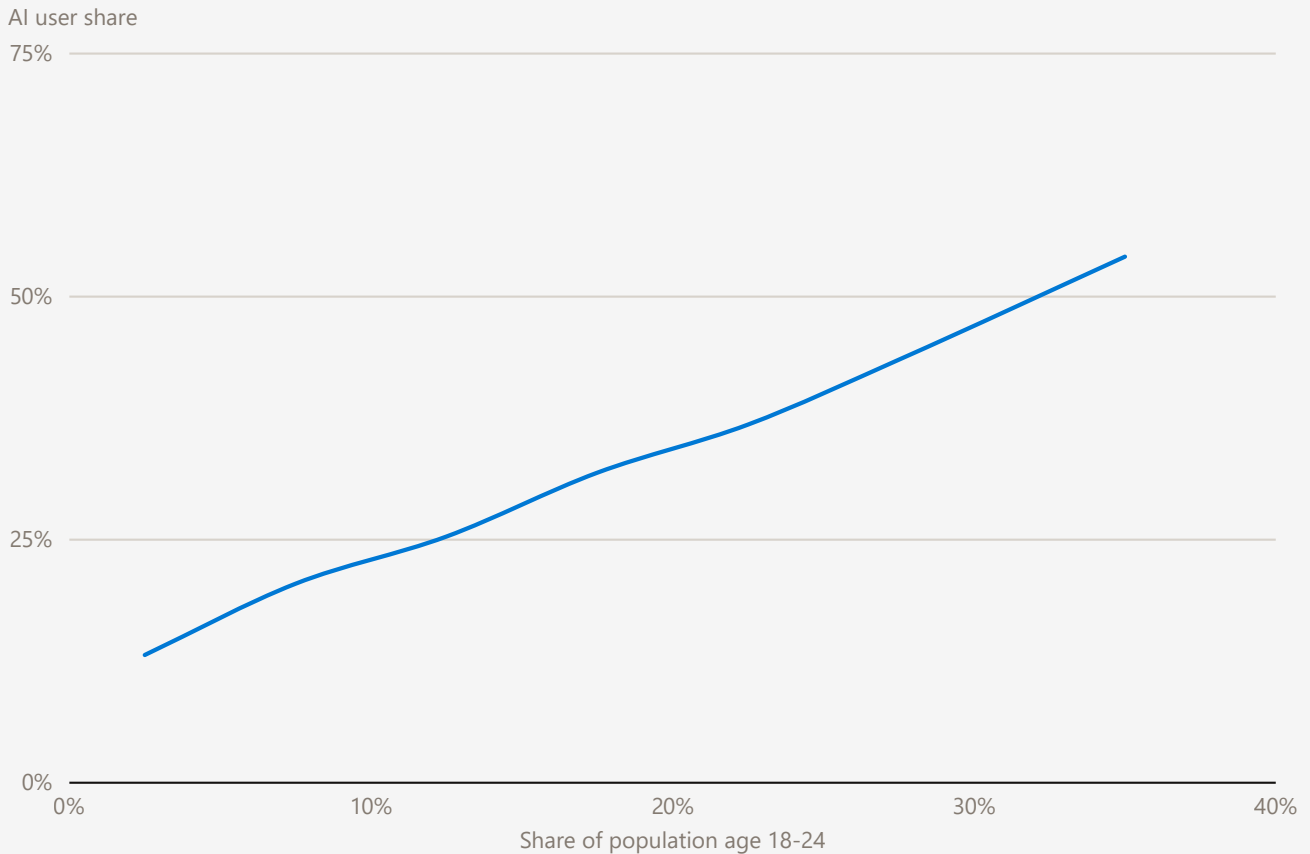
Young adults are adopting AI faster than other age groups and county-level AI adoption rates reflect this. Counties with larger shares of residents ages 18 to 24 tend to have higher AI User Share.

The college connection is striking. Among counties and county-equivalent areas with at least 10,000 residents, each of the top 15 counties by AI User Share has a college or university. Williamsburg, Virginia, home to the College of William and Mary, has the highest AI User Share in the country at 73.2%, and a highly concentrated young population, with 36.2% of its residents aged 18 to 24. Harrisonburg, Virginia, home to James Madison University,

follows at 67.5%. Madison County, Idaho, home to Brigham Young University-Idaho, ranks third at 67.2%, with 46.4% of residents between the ages of 18 and 24.

One notable deviation from this trend is Denton County, Texas. Denton is home to the University of North Texas and Texas Woman's University, but unlike the other top-15 counties, its 18-24 year old share is modest, with only 8.9% of residents in this age bracket. Denton is a suburb of Dallas, and is therefore influenced by the broader metro area and suburban growth as much as it is by the universities within it. It also ranks highly for technology access (#12 nationally) and has high household income relative to the rest of the

AI adoption rises with the share of young adults in a county



Dallas metro. While these attributes help explain the high AI adoption rate in Denton County, it still outperforms in relative terms. Overall, thirteen of the top 15 counties for AI User Share are above the 95th percentile nationally for proportion of residents ages 18 to 24.

This reflects a broader national trend. As the young-adult share of a county’s population rises, AI user share tends to rise as well, even after accounting for whether a county is metropolitan, micropolitan, or rural. This finding is

consistent with survey data from Pew and Gallup, both of which show that younger adults have the highest AI adoption rates among age groups. [8][9]

The connection to college campuses is strong, but AI use among young adults is not limited to schoolwork. Surveys show that adults under 30 use AI for a wide range of tasks, including information search, brainstorming, work, email writing, image generation, and entertainment. [10]

Top 15 counties by estimated AI user share (minimum 10k population)

Rank	County-Equivalent Area	State	Age 18-24	AI User Share	Anchor Institution
1	Williamsburg	Virginia	36.2%	73.2%	College of William & Mary
2	Harrisonburg	Virginia	32.7%	67.5%	James Madison University
3	Madison	Idaho	46.4%	67.2%	Brigham Young University-Idaho
4	Brazos	Texas	26.4%	64.0%	Texas A&M University
5	Story	Iowa	30.6%	63.8%	Iowa State University
6	Denton	Texas	8.9%	60.1%	University of North Texas
7	Clarke	Georgia	26.0%	59.0%	University of Georgia
8	Douglas	Kansas	23.0%	57.2%	University of Kansas
9	Charlottesville	Virginia	20.1%	51.7%	University of Virginia
10	Cleveland	Oklahoma	15.0%	51.6%	University of Oklahoma
11	Hays	Texas	14.2%	51.4%	Texas State University
12	Lee	Alabama	16.5%	50.8%	Auburn University
13	Montgomery	Virginia	27.8%	50.8%	Virginia Tech
14	Utah	Utah	16.8%	50.2%	Brigham Young University
15	Fredericksburg	Virginia	18.0%	49.3%	University of Mary Washington

AI Usage Variation Across U.S. Metropolitan Areas

Among the 35 U.S. metropolitan areas with working-age populations above 1.5 million, the differences in AI usage are bigger than one might expect. Washington, D.C. has the highest rate at 39.7%, followed by Dallas at 39.4%, Miami at 38.6%, Houston at 38.4%, and Atlanta at 38.0%. Pittsburgh has the lowest rate at 25.8%, followed by St. Louis at 26.8%, Columbus at 28.7%, Indianapolis at 28.8%, and Detroit at 29.1%.

The ranking shows that large population size does not explain AI adoption. High usage is also not limited to traditional technology hubs. Washington, D.C. likely reflects the concentration of federal, legal, consulting,

and professional work. Dallas and Houston point to stronger adoption in large Texas metros with corporate and energy-sector employment. Miami and Atlanta show higher usage in fast-growing Sun Belt metros with large service and business workforces.

The lower-ranked metros are mostly older industrial regions with strong institutions and manufacturing bases. Their lower usage rates suggest that these strengths do not automatically produce broad AI adoption. The difference appears to reflect the mix of jobs and demographics that are associated with higher AI usage described below.

Ranking of AI user share in the 35 largest U.S. metropolitan areas

35 largest U.S. metropolitan areas (population >1.5 million)

Rank	Metro	AI user share	Rank	Metro	AI user share
1	Washington DC, VA, MD, WV	39.7%	19	Tampa FL	33.8%
2	Dallas TX	39.4%	20	Baltimore MD	33.7%
3	Miami FL	38.6%	21	Charlotte NC, SC	33.6%
4	Houston TX	38.4%	22	Phoenix AZ	33.4%
5	Atlanta GA	38.0%	23	Cincinnati OH, KY, IN	32.9%
6	San Francisco CA	38.0%	24	Denver CO	32.8%
7	Austin TX	37.8%	25	Philadelphia PA, NJ, DE, MD	32.6%
8	Seattle WA	36.8%	26	Kansas City MO, KS	32.4%
9	Chicago IL, IN	36.6%	27	Portland OR, WA	31.1%
10	Las Vegas NV	36.5%	28	Sacramento CA	29.6%
11	San Diego CA	36.3%	29	Minneapolis MN, WI	29.2%
12	Orlando FL	36.2%	30	Cleveland OH	29.1%
13	San Antonio TX	35.4%	31	Detroit MI	29.1%
14	New York NY, NJ	35.2%	32	Indianapolis IN	28.8%
15	Boston MA, NH	35.1%	33	Columbus OH	28.7%
16	Riverside CA	35.1%	34	St. Louis MO, IL	26.8%
17	Nashville TN	34.7%	35	Pittsburgh PA	25.8%
18	Los Angeles CA	34.7%			

Industry Composition and AI Usage

Certain industries are associated with higher or lower rates of AI usage, and thus the proportion of jobs in those industries in a given county can affect the county AI adoption rate. We observe from the data that counties with larger concentrations of technical and professional services, corporate headquarters, health care, information, media, and finance tend to have higher AI adoption rates.

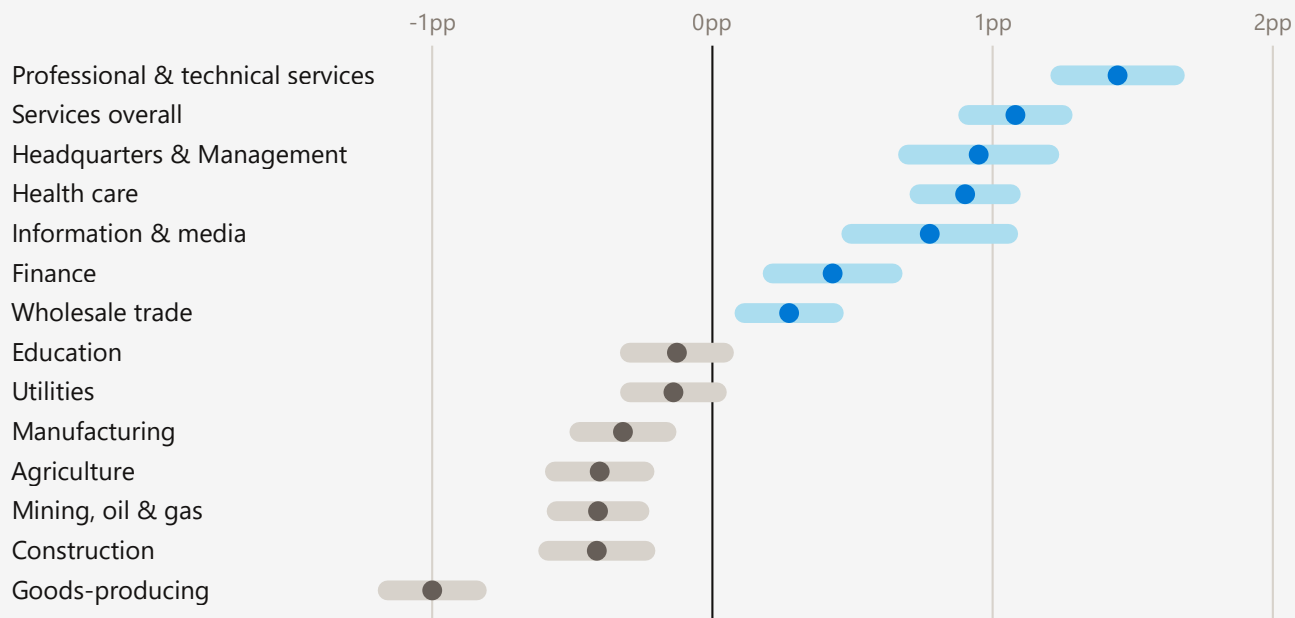
Conversely, counties with more employment in manufacturing, agriculture, mining, oil and gas, and construction tend to have lower AI usage. Goods-producing industries show the largest negative relationship in the chart.

These findings should not be interpreted to mean that AI is only applicable in some industries and not in others. AI is already creating opportunities across sectors, including manufacturing, agriculture, construction, and energy. Rather, the pattern likely reflects where AI adoption is currently most concentrated. While our analysis cannot directly identify which industries' workers are using AI, these patterns align with firm-level surveys showing the highest AI adoption rates in professional services and financial firms. **[11]**

How industry mix relates to AI usage

Relationship between each industry's share of local jobs and the county's AI usage rate in percentage points

● Point estimate ■ 95% confidence interval



Conclusion

AI adoption in the United States offers an early look at how this technology is beginning to reach people and communities across a large and diverse country. National adoption is already high, but the local picture shows that progress is uneven. AI is moving fastest in communities with stronger infrastructure, younger populations, major institutions, and job bases where digital tools are already part of daily work.

This matters because Americans will experience AI in different ways depending on where they live, learn, and work. A college town, a rural county, an industrial community, a farming region, and a large metropolitan area will each find different uses for these tools, shaped by local needs, institutions, and sources of opportunity.

AI is still in the early stages of diffusion, creating a window to shape how broadly its benefits are shared across the United States. Measurement can help identify where adoption is accelerating, where gaps are emerging, and what conditions help turn early experimentation into sustained value. With the right focus, AI can become more than another technology concentrated in the places that are already ahead. It can become a practical tool for growth and opportunity in communities across the country.

Citation and Data Availability

This report is based on the following technical paper:

A. Misra et al. "Measuring AI Diffusion Across U.S. Geographies: County, State, and Metro Estimates" May 27, 2026.

https://aka.ms/AI_Diffusion_US_Technical_Report

The underlying data used in this report is publicly available:

<https://github.com/microsoft/ai-diffusion-report/tree/main/data/US/>

When using this data, please cite the technical paper above and include a link to the dataset to ensure reproducibility and version transparency.

References

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- [10] AP-NORC Center for Public Affairs Research, "Young adults are leading the way in AI adoption," Jul 29, 2025. <https://apnorc.org/projects/young-adults-leading-the-way-in-ai-adoption/>
- [11] J. S. Allen (2026). "Monitoring AI Adoption in the U.S. Economy," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, Apr 3. <https://doi.org/10.17016/2380-7172.4032>

AI Diffusion Data Source

Rank	State Name	AI Diffusion
1	Maryland	36.3%
2	Utah	35.7%
3	Texas	35.3%
4	Virginia	34.7%
5	New Jersey	34.5%
6	Nevada	34.2%
7	California	34.0%
8	Connecticut	34.0%
9	Georgia	33.7%
10	Florida	33.6%
11	Massachusetts	33.4%
12	Illinois	33.3%
13	New York	32.7%
14	Rhode Island	32.5%
15	Colorado	32.3%
16	Washington	32.2%
17	Arizona	31.4%
18	Hawaii	30.6%
19	Delaware	30.6%
20	New Hampshire	30.2%
21	North Carolina	30.1%
22	South Carolina	29.1%
23	Oklahoma	28.9%
24	Idaho	28.8%
25	Kansas	28.6%

Rank	State Name	AI Diffusion
26	Tennessee	28.5%
27	Oregon	28.4%
28	Ohio	28.3%
29	Wisconsin	28.2%
30	North Dakota	28.2%
31	Michigan	27.4%
32	South Dakota	27.4%
33	Alabama	27.3%
34	Pennsylvania	27.2%
35	Indiana	26.8%
36	Missouri	26.8%
37	Nebraska	26.4%
38	Minnesota	26.3%
39	Louisiana	26.1%
40	Arkansas	26.0%
41	Wyoming	25.5%
42	Kentucky	25.1%
43	Iowa	24.4%
44	New Mexico	23.9%
45	Alaska	23.6%
46	Vermont	23.3%
47	Mississippi	22.9%
48	Montana	22.7%
49	Maine	21.4%
50	West Virginia	20.8%

