



# DATA SCIENCE & AI PROFESSIONALS SALARY REPORT

2024 EDITION



**Women in  
Data Science  
Worldwide**

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### *Data Science & AI Hiring Landscape*

# CONTINUED GROWTH AND SPECIALIZATION IN AI

#### **Generative AI and Large Language Models**

The demand for professionals skilled in generative AI and large language models has continued to rise. Companies are increasingly focused on enhancing their core enterprise business process and aspire to develop innovative products and services.

#### **Specialized Roles**

There is a growing trend towards specialization within the AI field, with new job titles such as AI Engineer, Prompt Engineer, NLP Specialist, Computer Vision Engineer and more.

# INCREASED INVESTMENT IN AI

#### **Venture Capital and Private Equity**

There has been a significant influx of venture capital and private equity funding into AI startups and projects. This trend is driving rapid innovation and the development of new AI applications across various industries.

#### **Corporate Investment**

Large corporations are also increasing their investment in AI to stay competitive and leverage the latest advancements in technology.

Where we are  
**TODAY**

## Ongoing Demand for Data Science &amp; AI Talent

## Q3/Q4 HIRING SURVEY

47%

of leaders **plan to grow** their data teams.

47%

of data teams plan to **hold steady** in their hiring plans.

6%

of leaders **plan to reduce** their data teams.

60%

of data teams plan to make **permanent hires only**.

20%

of data teams plan to make **contract hires only**.

20%

of data teams plan to make **both permanent and contract hires**.

40%

of data teams are **hiring primarily to increase headcount**.

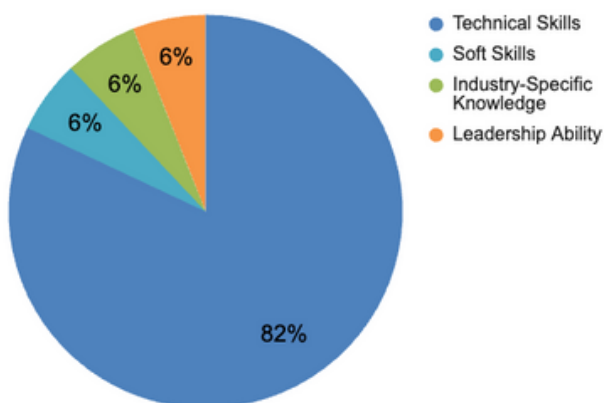
33%

of data teams are **hiring primarily due to backfilling**.

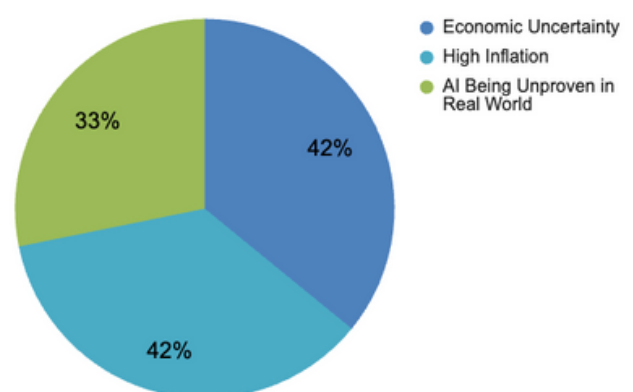
27%

of data teams are **planning to hire based on project-based demand**.

Skills and expertise that companies are prioritizing in their new hires:



Economic conditions impacting hiring needs the most:



# Hiring Demand OVERVIEW

## Speeding the AI Impact

# EMPHASIS ON DATA AND AI AS A SERVICE

### Data and AI Services

The adoption of Data as a Service (DaaS) and AI as a Service (AlaaS) models is growing. Companies are leveraging these services to access advanced AI capabilities without the need to build and maintain their own infrastructure.

Data as a Service (DaaS) is a cloud-based data management strategy that allows users to access data on demand over the Internet. In this model, data is stored, managed, and delivered by a service provider, making it accessible to users and applications regardless of geographic or organizational boundaries.

AI as a Service (AlaaS) is a cloud-based service model that provides businesses and individuals with access to AI capabilities without the need for extensive in-house infrastructure or expertise. AlaaS allows users to integrate AI functionalities such as machine learning, natural language processing, and computer vision into their applications via APIs and other tools.

### Cloud Integration

Integration with cloud platforms is becoming essential, with major providers offering a range of AI and machine learning services that are easily accessible and scalable.



**Sharp Demand for AI Skills**

# TALENT ACQUISITION AND RETENTION

**Skills Shortage**

The demand for skilled Data Science and AI professionals continues to outstrip supply, as many people have not yet developed the skills to excel in new AI roles. This is leading to intense competition among companies to attract and retain top talent. Tech services play a critical role in training. Currently, only 1 in 10 technology workers possess the skills to be successful in AI technology.

**Core Enterprise Focus on AI**

Companies are in a “wait and see” posture to understand the core enterprise use cases around GenAI and artificial intelligence before scaling hiring. Companies are uncertain about the rapid advancements and potential directions in AI technology. This uncertainty makes it challenging to predict the specific skills and expertise that will be required in the near future.

Many organizations are focusing on pilot projects and small-scale trials to evaluate the benefits and challenges of AI implementation. These projects help them gather insights and develop a better understanding of their AI needs before committing to large-scale hiring. More change management is required with AI as it changes the core enterprise of the business.



## Signs of Recovery and Investment in Innovation

# COMPARISON TO 2023

### Economic Uncertainty

While the 2023 job market faced economic uncertainty with layoffs and hiring freezes, the 2024 landscape shows signs of recovery with increased investment and a renewed focus on growth and innovation.

### Hiring Practices

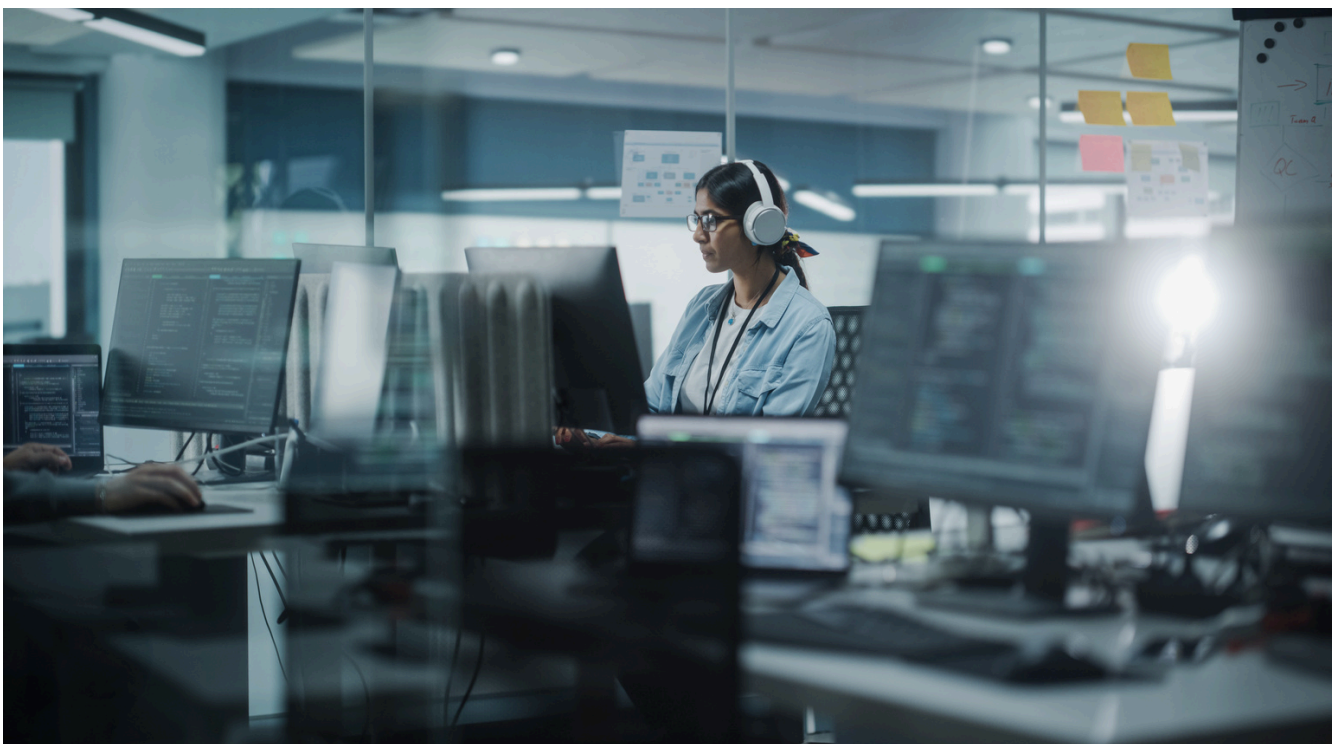
The hiring frenzy of 2021-2022 has been replaced by more cautious and strategic hiring practices in 2023, focusing on candidates who bring immediate value. In 2024, the emphasis remains on attracting highly skilled professionals but with a clearer strategy to fill critical roles.

### Compensation Trends

Salaries for Data Science and AI professionals have stabilized after the significant increases seen in 2022. The 2024 report shows consistent compensation levels, reflecting a balanced supply and demand dynamic.

### Team Composition

The 2024 report shows a trend on companies utilizing highly skilled individual contributors to test the waters with AI before investing at a larger scale. Companies are seeking to uncover the benefits within the core enterprise before scaling the organization.





SECTION 2

# COMPENSATION CHANGES

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# JOB LEVEL SEGMENTATION

To examine how the compensation of Data Scientists and AI Professionals varies, WIDS used characteristics of their jobs (level, location of employee, industry) and demographic characteristics (gender, years of experience, residency status) to segment data scientists.

Women in Data Science Worldwide has developed the following job categories:

## Individual Contributors

Level	Responsibility	Years of Experience
IC-1	Learning the job, hands-on analytics & modeling	0-3 years
IC-2	Hands-on, advanced problems, may help train analysts	4-8 years
IC-3	Analytics SMEs, mentors and trains analysts	9+ years

## Managers

Level	Responsibility	Typical No. of Reports
MG-1	Tactical, leads a small team w/in a function, project execution responsibility	1-3 reports (direct or matrixed)
MG-2	Leads a function, moderately sized team, executes strategy	4-15 reports (direct or matrixed)
MG-3	Senior/executive management, determine strategy, large team	15+ reports (direct or matrixed)

# THE DISTINCT ROLES OF DATA SCIENTISTS AND AI PROFESSIONALS

Women in Data Science Worldwide differentiates professionals that work primarily with structured data (Data Scientists) from those that work primarily with unstructured data (AI Professionals). Both groups analyze data and create statistical models to glean insights and prescribe action, but AI Professionals use sophisticated computer science and programming skills that are not typically used by Data Scientists. This variation in skillset has a marked influence on salaries.

This year our sample included 1,570 Data Scientists and 485 AI Professionals for a total sample of 2,055 data professionals.

## IMPACTS OF SUPPLY & DEMAND

Women in Data Science Worldwide has been reporting on the salaries of Data Scientists and AI Professionals for over 10 years. Our latest report for 2024, covering May 2023 to April 2024, reveals a remarkable trend: Manager salaries have decreased. Companies are cautiously entering the AI space without making significant investments in managerial expertise, opting instead for individual contributors who can make a significant impact at a lower cost.



# 2024 BASELINE DATA

Salaries for AI professionals are often higher than those for data scientists for several reasons. First, there is simply a supply and demand effect at work here. The demand for AI professionals has surged due to the rapid advancements in AI technologies and their applications across various industries. Many companies are looking to implement AI to gain a competitive edge. Coupled with their being relatively fewer professionals with the specialized skills required for AI roles compared to the broader field of Data Science. This scarcity drives up salaries.

Consistent with our findings from previous reports, it appears that AI professionals may earn more base salary when compared to Data Science professionals across all job levels.

Related to the supply issue mentioned above, AI professionals typically possess advanced skills in machine learning, deep learning, natural language processing, computer vision, and other specialized AI techniques, such as:

- **Reinforcement Learning (RL):** A type of machine learning where agents learn to make decisions by performing actions in an environment to maximize cumulative reward. RL is widely used in robotics, gaming, and autonomous systems.
- **Generative Adversarial Networks (GANs):** A class of deep learning models used for generating realistic data, such as images, music, or text, by training two neural networks (a generator and a discriminator) in opposition to each other.
- **Transfer Learning:** A technique where a model developed for a particular task is reused as the starting point for a model on a second task. It is particularly useful in areas where data is scarce.
- **Meta-Learning:** Often referred to as "learning to learn," this technique involves models that can learn new tasks more efficiently by leveraging prior knowledge from previous tasks.
- **Bayesian Networks:** These are probabilistic graphical models that represent a set of variables and their conditional dependencies. They are used in fields like medical diagnosis and decision support systems.
- **Neural Architecture Search (NAS):** An automated process for designing neural network architectures. NAS can find more efficient and effective architectures than manually designed ones.



# 2024 BASELINE DATA

- **Few-Shot and Zero-Shot Learning:** Techniques where models are trained to recognize new classes with very few (few-shot) or no (zero-shot) labeled examples, improving their adaptability to new tasks.
- **Federated Learning:** A decentralized approach to training machine learning models where data remains on local devices, and only model updates are shared, enhancing privacy and security.
- **Multimodal Learning:** Techniques that integrate and process multiple types of data, such as text, images, and audio, to create models that can understand and generate content across different modalities.
- **Natural Language Processing (NLP) Specializations:** Advanced techniques in NLP such as sentiment analysis, language translation, and text summarization, often involving sophisticated models like transformers.
- **Graph Neural Networks (GNNs):** Neural networks designed to operate on graph structures, useful for applications like social network analysis.

These skills often require a deeper understanding of algorithms, mathematics, and computer science. What other type of data do AI professionals work (better suited for) with?

AI professionals are particularly well-suited to work on various types of unstructured data, which often require specialized techniques and advanced methodologies to process and analyze. Some of these types of unstructured data include:

- **Text Data:** For Natural Language Processing (NLP) and Document Analysis.
- **Image Data:** In Computer Vision (image classification, object detection, and image segmentation) and also Image Generation and Enhancement (using Generative Adversarial Networks, or GANs, to generate realistic images, enhance image quality, or perform style transfer).
- **Audio Data:** Used in Speech Recognition (converting spoken language into text), Audio Classification & Analysis (identifying and classifying sounds, music genre, or emotion detection in speech).
- **Video Data:** For Object Detection and Tracking (activity recognition, video summarization, and action recognition), and Video Generation and Enhancement (creating synthetic videos, enhancing video quality, or performing video inpainting).
- **Sensor Data:** Internet of Things (IoT) data for applications in smart homes, industrial monitoring, and healthcare. Also, Wearable Devices for activity recognition, health monitoring, and personalized fitness recommendations.
- **Graph Data:** In Graph Neural Networks (GNNs) like social networks, molecular structures, or knowledge graphs.
- **Multimodal Data:** Integrating and analyzing data from multiple sources, such as text, images, and audio, to create comprehensive models that understand and generate content across different types of data.

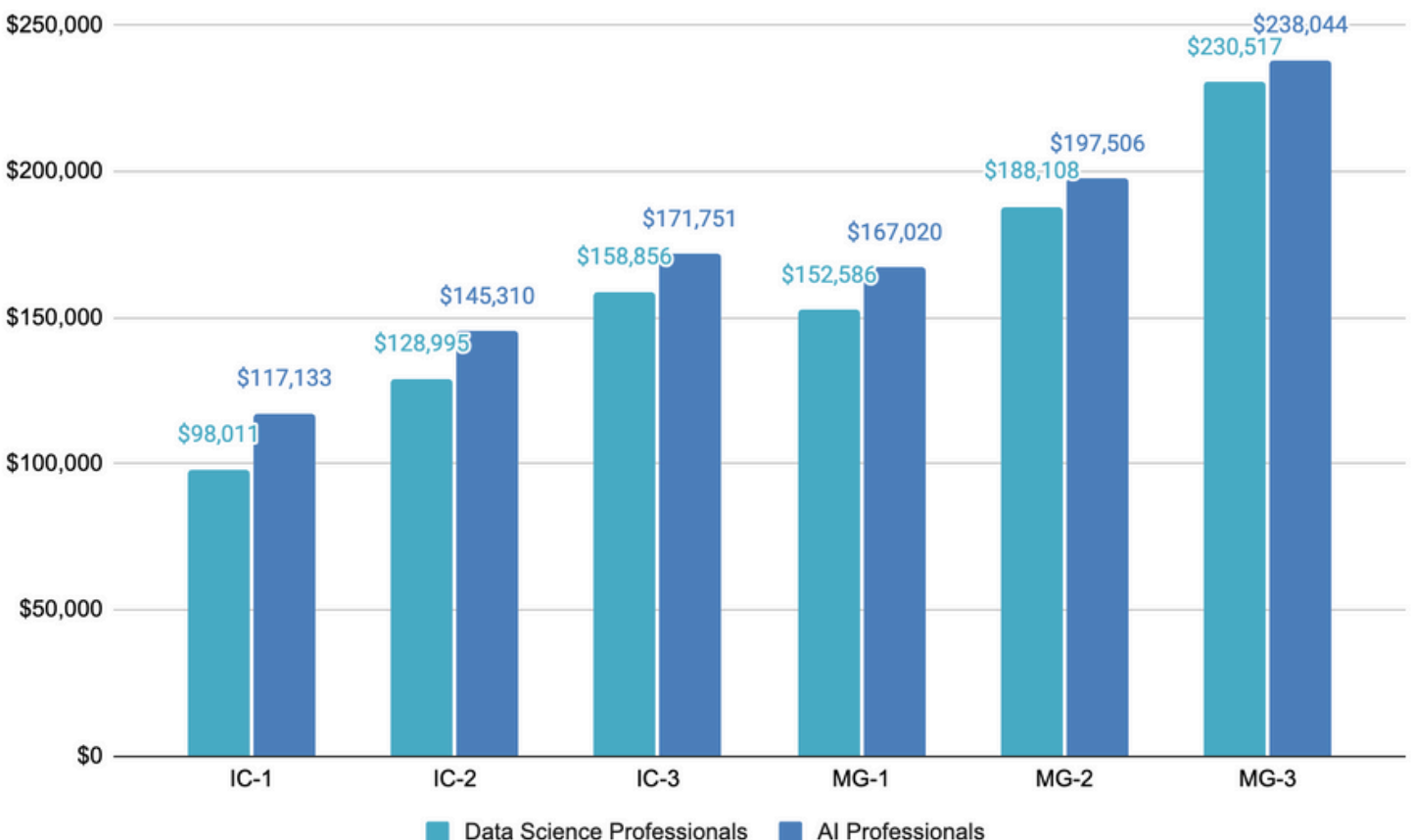
# 2024 BASELINE DATA

AI professionals use advanced machine learning and deep learning techniques tailored to these types of unstructured data, leveraging specialized knowledge and tools to extract meaningful insights and build powerful AI applications.

It takes continuous learning and adaptation to stay updated with the latest research and developments in the field. This goes along with the fact that many AI roles require advanced degrees (Master's or Ph.D.) in fields like computer science, artificial intelligence, or related disciplines. The investment in education and training is higher for AI professionals than data scientists in general. Additionally, AI projects often involve solving complex and novel problems that require significant innovation and creativity. Of course, the potential impact of AI solutions can be substantial, influencing strategic decisions and operations within organizations. AI roles can be highly specialized, focusing on specific areas such as reinforcement learning, generative models, or autonomous systems, which are often critical to the strategic goals of companies.

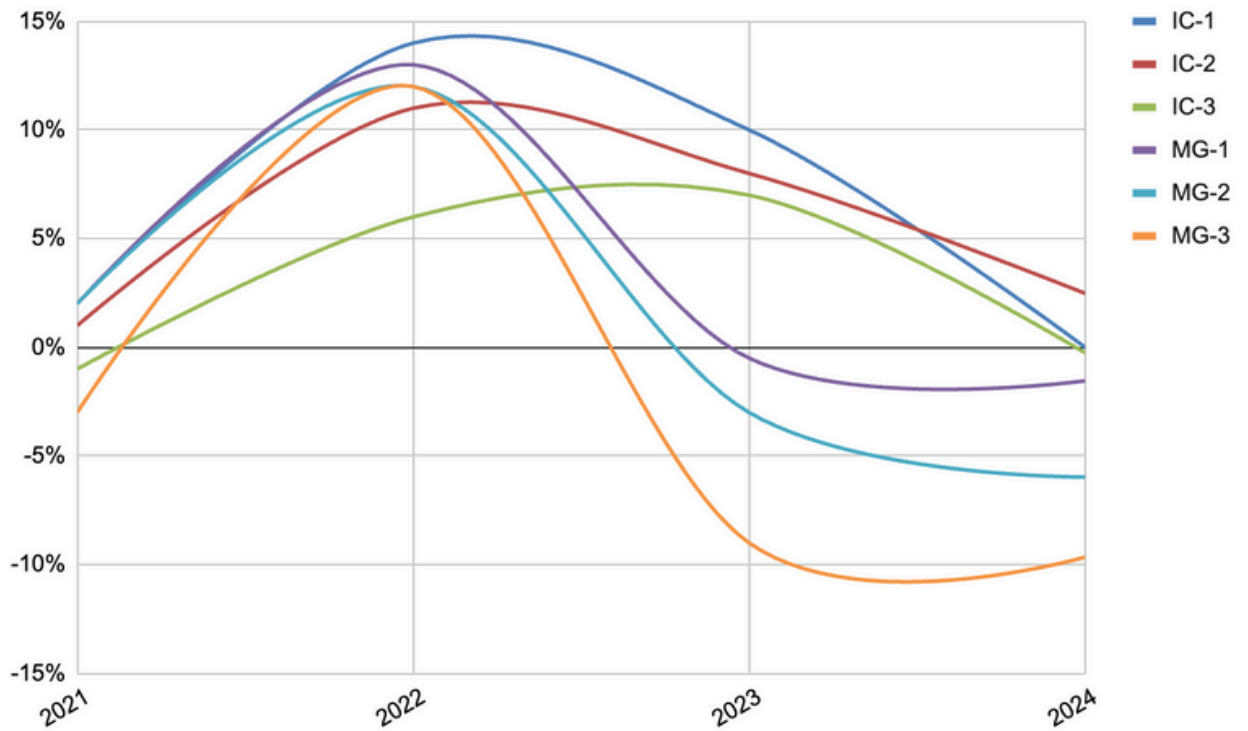
As a result of all this, companies investing heavily in AI research and development often allocate substantial budgets to attract top talent in AI to maintain a competitive edge. Startups and tech giants offer attractive compensation packages to secure the best AI talent, contributing to overall higher salary levels in the industry. These factors collectively contribute to the higher salaries for AI professionals compared to data scientists.

## 2024 Mean Base Salaries

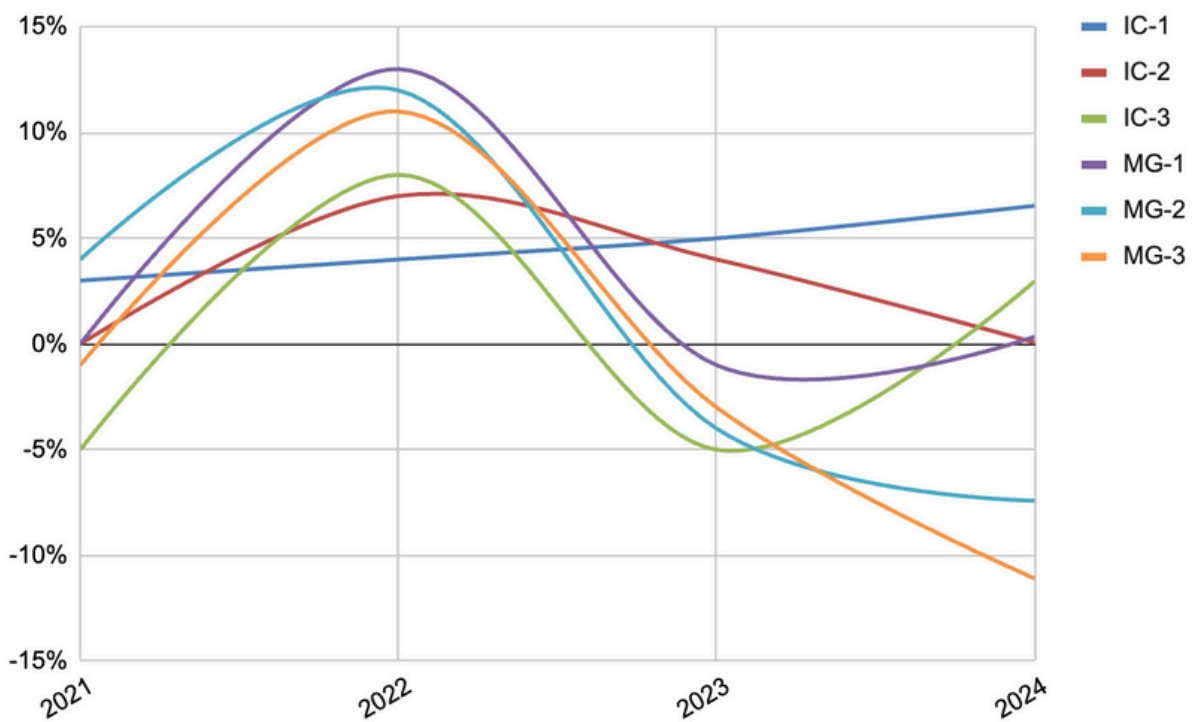


# COMPENSATION CHANGES

## Data Science Professionals - Mean Base Salary Changes Over Time

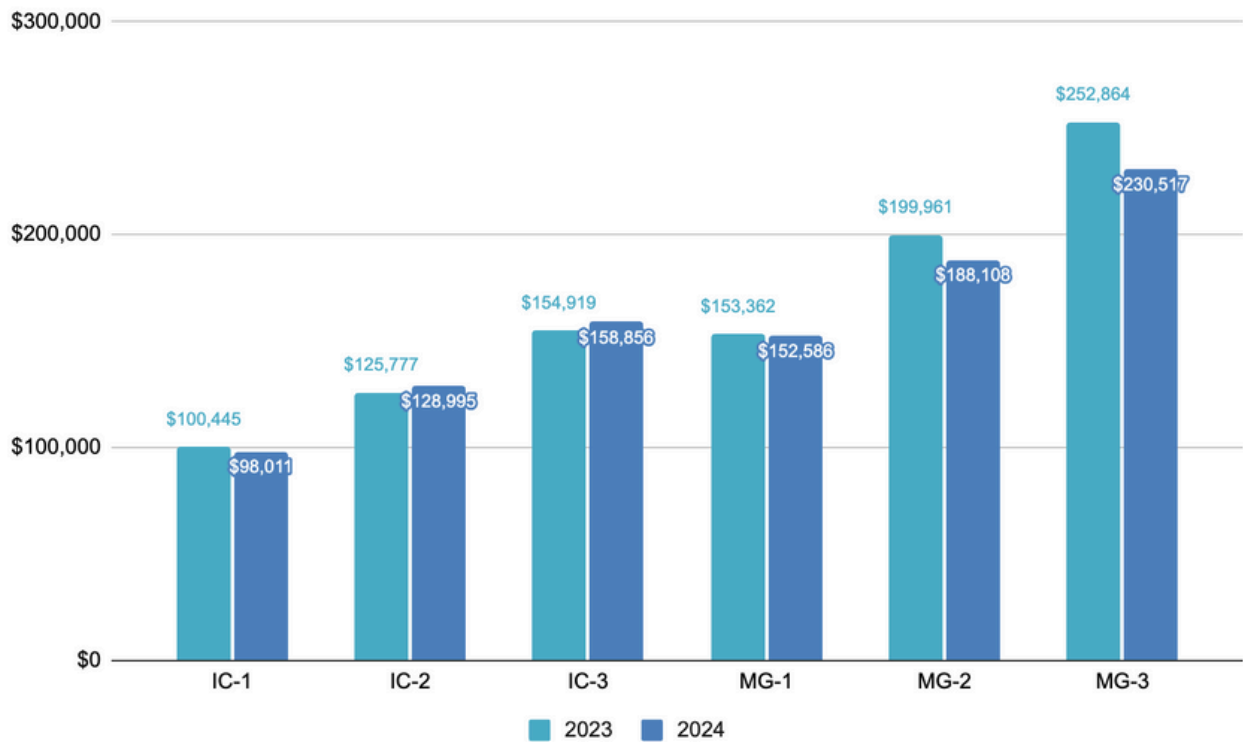


## AI Professionals - Mean Base Salary Changes Over Time

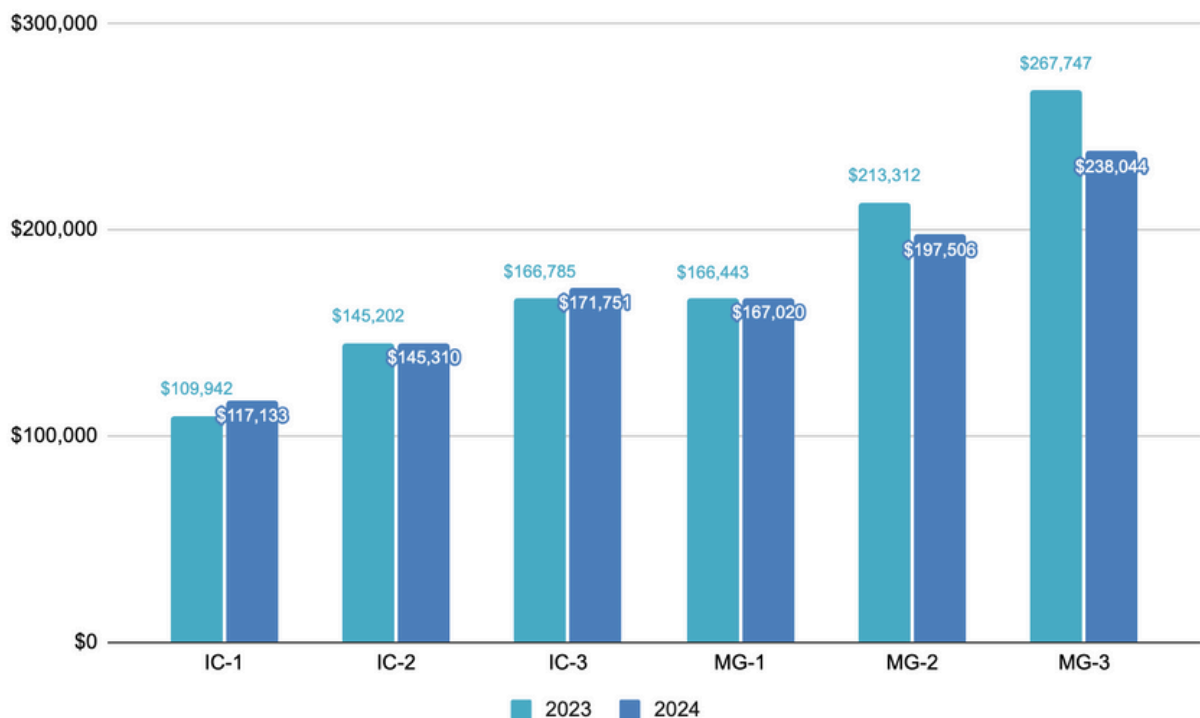


# COMPENSATION CHANGES

## Comparison of Data Science Mean Base Salaries: 2023 vs. 2024



## Comparison of AI Professionals Mean Base Salaries: 2023 vs. 2024



# COMPENSATION CHANGES: DATA SCIENCE SALARIES

Mean base salaries for Data Science professionals show nominal increases across all three individual contributor job levels compared to 2023. There is statistically significant evidence that MG-2 salaries for Data Science professionals decreased from 2023 to 2024.

Job Level	Year	Mean
IC-1	2023	\$100,445
	2024	\$100,447
	Change	+0.00015%
IC-2	2023	\$125,777
	2024	\$128,902
	Change	+2.48%
IC-3	2023	\$154,919
	2024	\$154,522
	Change	-0.26%

Job Level	Year	Mean
MG-1	2023	\$153,362
	2024	\$151,004
	Change	-1.54%
MG-2	2023	\$199,961
	2024	\$188,028
	Change	-5.97%
MG-3	2023	\$252,864
	2024	\$228,477
	Change	-9.65%



# COMPENSATION CHANGES: AI PROFESSIONALS SALARIES

The mean base salaries for AI professionals show a statistically significant increase at IC-1 and IC-2 levels, with a slight increase at IC-3. MG-1 salaries have remained relatively flat, while MG-2 and MG-3 salaries have significantly decreased. This suggests that organizations are still hesitant to invest in upper-level management overseeing large teams of AI professionals. **IC salaries increased from 2023 to 2024 and MG salaries decreased from 2023 to 2024.** Once the market builds confidence with AI and scales up, we expect IC-2, IC-3, and MG-1 demand to increase, driving higher compensation.

Job Level	Year	Mean
IC-1	2023	\$109,942
	2024	\$117,133
	Change	+6.54%
IC-2	2023	\$145,202
	2024	\$145,310
	Change	+0.07%
IC-3	2023	\$166,785
	2024	\$171,751
	Change	+2.98%

Job Level	Year	Mean
MG-1	2023	\$166,443
	2024	\$167,020
	Change	+0.35%
MG-2	2023	\$213,312
	2024	\$197,506
	Change	-7.41%
MG-3	2023	\$267,747
	2024	\$238,044
	Change	-11.09%

# COMPENSATION CHANGES: DATA SCIENCE BONUSES

The median bonus percentages for Data Science and AI professionals increase with higher job levels and as professionals move from IC to MG roles.

In terms of changes in target bonus percentages from 2023 to 2024 for Data Science, there are indications that the percentages offered to lower-level employees (IC1 and MG-1) may have decreased by about 5 percent. However, bonuses provided to MG-3 appear to have increased by about 10 percent.

Job Level	Year	25%	Median	Mean	75%
IC-1	2023	10%	12%	13%	15%
	2024	10%	10%	9%	10%
IC-2	2023	8%	10%	13%	15%
	2024	10%	10%	15%	20%
IC-3	2023	10%	14%	17%	20%
	2024	10%	10%	13%	18%

Job Level	Year	25%	Median	Mean	75%
MG-1	2023	12%	25%	16%	20%
	2024	10%	10%	12%	12%
MG-2	2023	18%	20%	23%	25%
	2024	13%	20%	25%	25%
MG-3	2023	20%	25%	25%	30%
	2024	19%	36%	44%	55%

# COMPENSATIONS CHANGES: AI PROFESSIONALS BONUSES

Bonus percentages for AI professionals for IC-1 and MG-1 increased by 5 percent or so, and bonuses to MG-3 have decreased by about 10 percent. Interestingly, this trend is opposite of the trend of Data Science bonuses.

Job Level	Year	25%	Median	Mean	75%
IC-1	2023	10%	13%	13%	17%
	2024	10%	10%	10%	10%
IC-2	2023	10%	13%	15%	16%
	2024	10%	13%	24%	26%
IC-3	2023	10%	15%	16%	21%
	2024	15%	15%	15%	15%

Job Level	Year	25%	Median	Mean	75%
MG-2	2023	20%	20%	27%	30%
	2024	18%	20%	22%	25%
MG-3	2023	21%	33%	32%	40%
	2024	20%	20%	20%	20%



SECTION 3

# DEMOGRAPHIC PROFILE

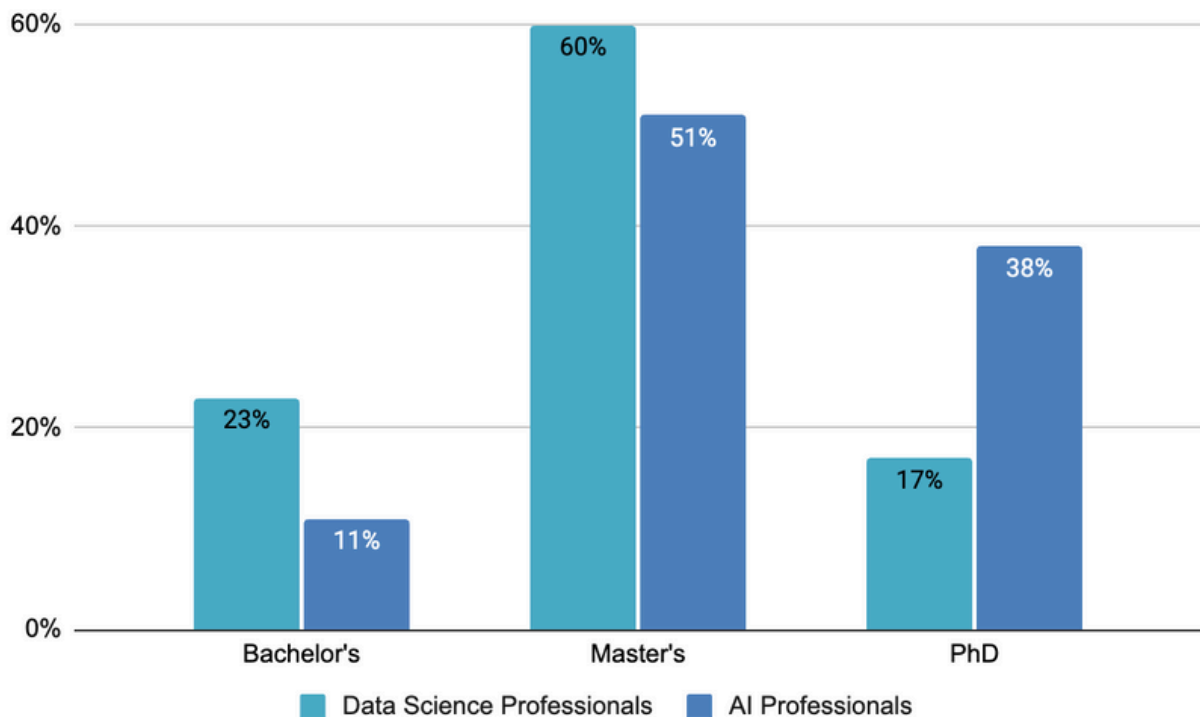
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# EDUCATION: COMPARISON OF DEGREE LEVEL

- 80% of all Data Science and AI professionals surveyed held an advanced degree. Education level has historically had a marked effect on salary.
- The proportion of AI professionals with a Master's and/or PhD as their highest degree earned is higher than Data Science professionals and is a statistically significant difference.
- Graduates with higher education degrees are leaving academia and moving to industry roles in data and AI, creating a shortage of skilled labor in academia.
- Mid-career individuals from industry are going back and getting higher education degrees to further differentiate their skill set and education to position themselves in a competitive market.
- There is an increase in domestic skilled labor competitiveness.

COMPARISON OF DEGREE LEVEL *(for highest degree earned)*

## Data Science Professionals vs. AI Professionals

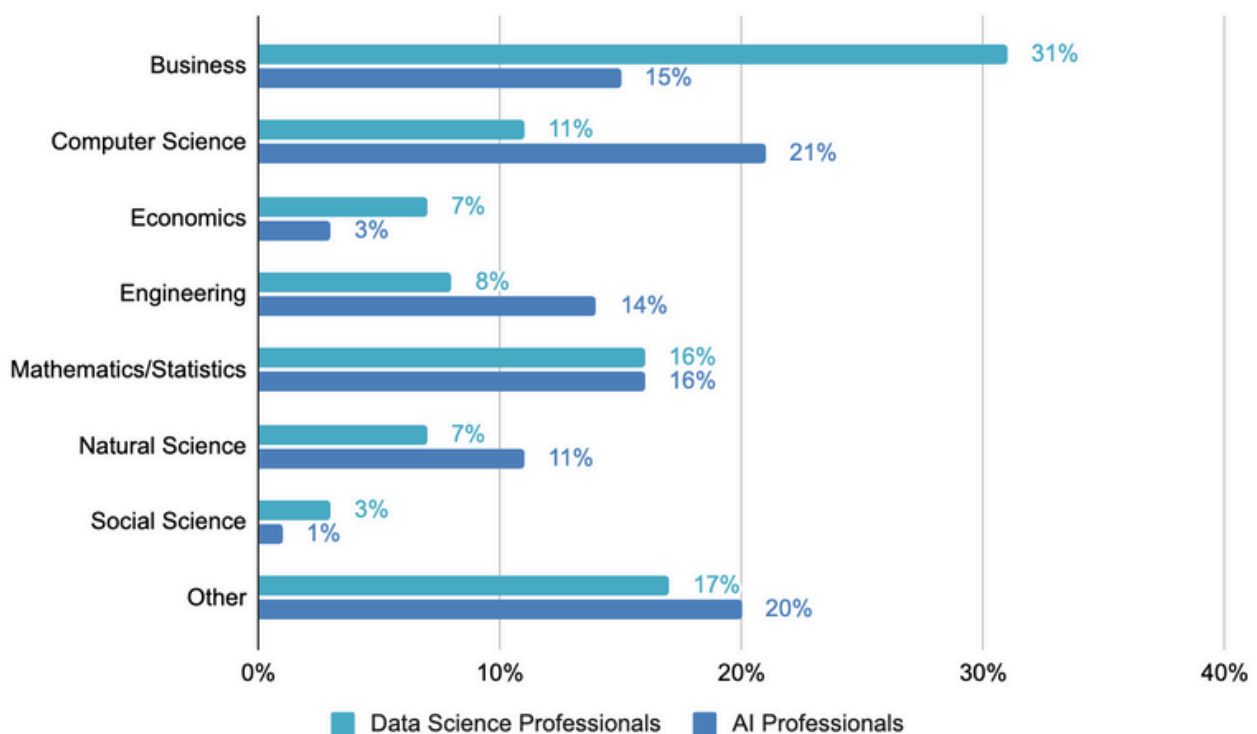


# EDUCATION: COMPARISON OF AREA OF STUDY

- More individuals are up-skilling via courses and private learning.
- Data Science professionals working with structured data are more responsible for delivering business insights, and this explains why a business degree is more advantageous, whereas computer science degrees are more apt for those working in AI (unstructured).

COMPARISON OF AREA OF report (for highest degree earned)

## Data Science Professionals vs. AI Professionals



# EDUCATION: HIGHEST DEGREE BY JOB LEVEL

## Data Science Professionals

Highest Degree	IC-1	IC-2	IC-3	MG-1	MG-2	MG-3
Bachelor's	30%	23%	15%	25%	18%	18%
Master's	55%	62%	62%	62%	63%	62%
PhD	14%	15%	22%	12%	19%	20%

## AI Professionals

Highest Degree	IC-1	IC-2	IC-3	MG-1	MG-2	MG-3
Bachelor's	14%	12%	9%	9%	6%	6%
Master's	63%	51%	41%	49%	47%	44%
PhD	22%	37%	49%	43%	47%	50%



# EDUCATION: SALARIES BY JOB LEVEL FOR DATA SCIENCE PROFESSIONALS

Professionals with advanced degrees, especially those with PhDs, tend to earn higher salaries than others at the same job level as individual contributors. As managers increase in seniority and management responsibility, degree level has less of an impact on salary.

Job Level	Degree	25th	Median	Mean	75th
IC-1	BS	\$68,300	\$80,300	\$84,526	\$100,000
	MS	\$80,300	\$95,250	\$100,876	\$120,000
	PhD	\$100,000	\$119,500	\$116,733	\$130,000
IC-2	BS	\$95,300	\$113,500	\$117,228	\$138,750
	MS	\$110,000	\$130,000	\$129,592	\$150,000
	PhD	\$130,000	\$150,000	\$145,600	\$160,000
IC-3	BS	\$127,500	\$145,000	\$150,962	\$160,100
	MS	\$137,250	\$160,000	\$158,038	\$180,000
	PhD	\$145,125	\$170,050	\$167,095	\$180,100
MG-1	BS	\$125,000	\$140,000	\$145,586	\$161,250
	MS	\$140,000	\$155,300	\$154,817	\$170,000
	PhD	\$150,000	\$160,000	\$158,163	\$170,000
MG-2	BS	\$160,025	\$170,050	\$176,756	\$190,000
	MS	\$170,000	\$185,000	\$189,481	\$200,000
	PhD	\$175,750	\$190,100	\$194,586	\$217,550
MG-3	BS	\$187,650	\$250,000	\$236,260	\$285,000
	MS	\$188,775	\$224,000	\$225,271	\$251,400
	PhD	\$200,100	\$230,100	\$241,494	\$250,000



# EDUCATION: SALARIES BY JOB LEVEL FOR AI PROFESSIONALS

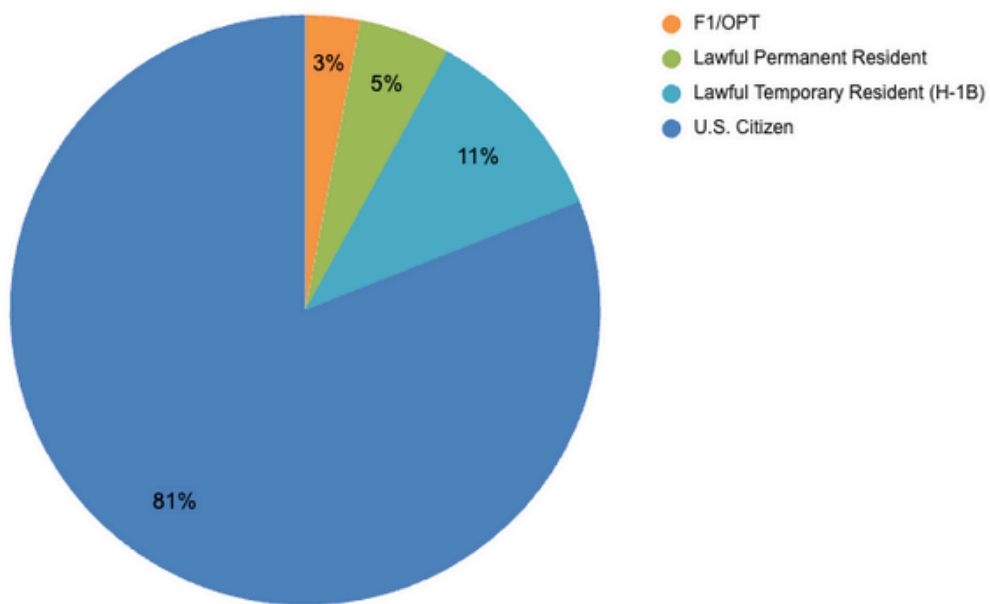
Job Level	Degree	25th	Median	Mean	75th
IC-1	BS	\$90,000	\$110,000	\$107,665	\$120,000
	MS	\$100,000	\$117,650	\$117,693	\$130,000
	PhD	\$110,000	\$122,650	\$120,423	\$130,000
IC-2	BS	\$123,775	\$140,000	\$142,625	\$158,250
	MS	\$120,125	\$140,000	\$139,685	\$150,175
	PhD	\$136,250	\$150,050	\$153,979	\$170,000
IC-3	BS	\$145,000	\$160,100	\$168,244	\$200,000
	MS	\$145,100	\$170,100	\$168,759	\$180,200
	PhD	\$152,550	\$175,000	\$174,904	\$195,000
MG-1	BS	\$132,700	\$140,100	\$138,467	\$145,050
	MS	\$150,300	\$165,000	\$160,900	\$170,000
	PhD	\$150,000	\$180,000	\$179,667	\$200,000
MG-2	BS	\$182,550	\$185,000	\$191,700	\$197,500
	MS	\$170,100	\$180,100	\$193,309	\$210,100
	PhD	\$180,000	\$200,100	\$202,461	\$225,050
MG-3	BS	\$250,000	\$250,000	\$250,000	\$250,000
	MS	\$177,725	\$200,050	\$211,325	\$237,500
	PhD	\$225,000	\$240,000	\$260,467	\$300,000

# CANDIDATE RESIDENCY STATUS

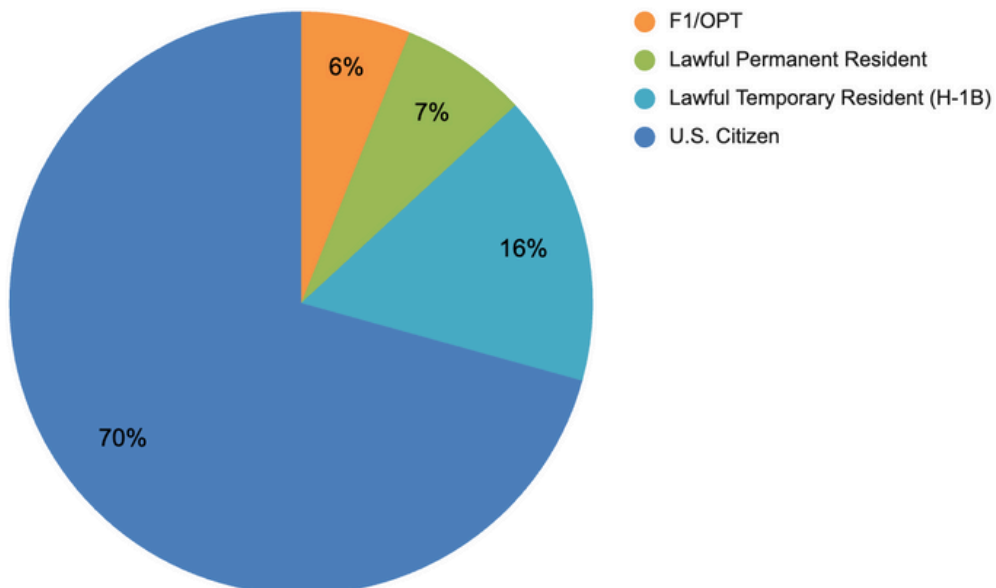


Companies appear more willing to hire non-US citizens (F1/OPT, lawful permanent residents, and H-1B visa holders) for AI roles, compared to Data Science positions.

## Data Science Professionals Residency Status Breakdown



## AI Professionals Residency Status Breakdown



# SALARIES BY REGION: DATA SCIENCE PROFESSIONALS

- In 2024, West Coast average salaries are greater than in the Midwest, Mountain, and Southeast.
- Northeast average salaries are greater than in the Midwest and Southeast.

Level	Region	Base Salary			
		25%	Median	Mean	75%
IC-1	Midwest	\$75,000	\$85,000	\$89,235	\$100,000
	Mountain	\$84,050	\$105,000	\$107,074	\$125,100
	Northeast	\$80,200	\$100,000	\$101,278	\$120,000
	Southeast	\$80,000	\$90,300	\$97,214	\$110,000
	West Coast	\$85,000	\$110,000	\$109,676	\$130,000
IC-2	Midwest	\$95,300	\$120,000	\$120,780	\$145,000
	Mountain	\$105,000	\$120,100	\$126,493	\$145,050
	Northeast	\$120,000	\$135,200	\$134,648	\$150,000
	Southeast	\$99,000	\$125,000	\$122,001	\$140,000
	West Coast	\$125,000	\$135,000	\$140,851	\$160,000
IC-3	Midwest	\$131,250	\$150,000	\$152,655	\$163,750
	Mountain	\$130,100	\$150,000	\$152,649	\$168,000
	Northeast	\$142,500	\$165,000	\$162,919	\$180,000
	Southeast	\$140,000	\$160,000	\$160,251	\$180,000
	West Coast	\$136,250	\$150,000	\$158,569	\$180,000

Level	Region	Base Salary			
		25%	Median	Mean	75%
MG-1	Midwest	\$130,000	\$140,050	\$145,421	\$165,000
	Mountain	\$140,500	\$157,500	\$151,245	\$160,050
	Northeast	\$136,250	\$160,000	\$158,533	\$175,000
	Southeast	\$138,750	\$152,500	\$152,515	\$166,250
	West Coast	\$140,000	\$150,000	\$151,627	\$167,500
MG-2	Midwest	\$160,275	\$180,000	\$188,750	\$216,250
	Mountain	\$167,550	\$190,000	\$187,244	\$200,100
	Northeast	\$180,000	\$190,150	\$193,811	\$210,000
	Southeast	\$160,000	\$180,100	\$177,836	\$190,000
	West Coast	\$164,500	\$180,200	\$189,674	\$212,600
MG-3	Midwest	\$185,000	\$227,500	\$234,577	\$253,750
	Mountain	\$170,000	\$180,000	\$182,600	\$205,000
	Northeast	\$195,000	\$230,100	\$234,826	\$271,000
	Southeast	\$217,500	\$240,000	\$245,520	\$265,050
	West Coast	\$215,050	\$240,000	\$235,238	\$252,650

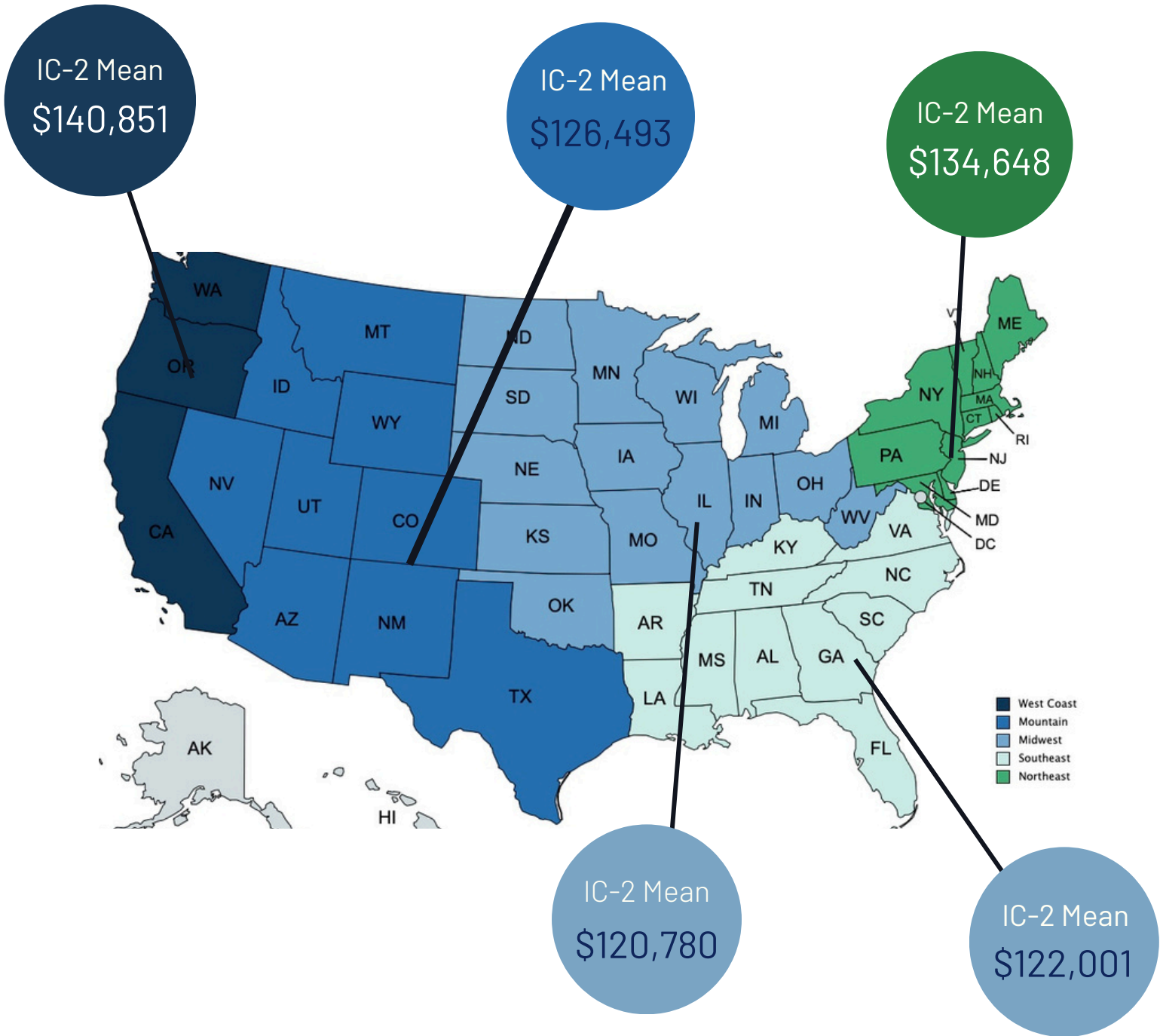
# SALARIES BY REGION: AI PROFESSIONALS

- There are no significant regional differences in 2024 for AI professionals.
- One of the leading indicators we've observed is that there are more remote job openings for AI professionals compared to Data Science professionals. This is due to the higher demand for sophisticated AI skill sets, which allows for greater flexibility in remote hiring.

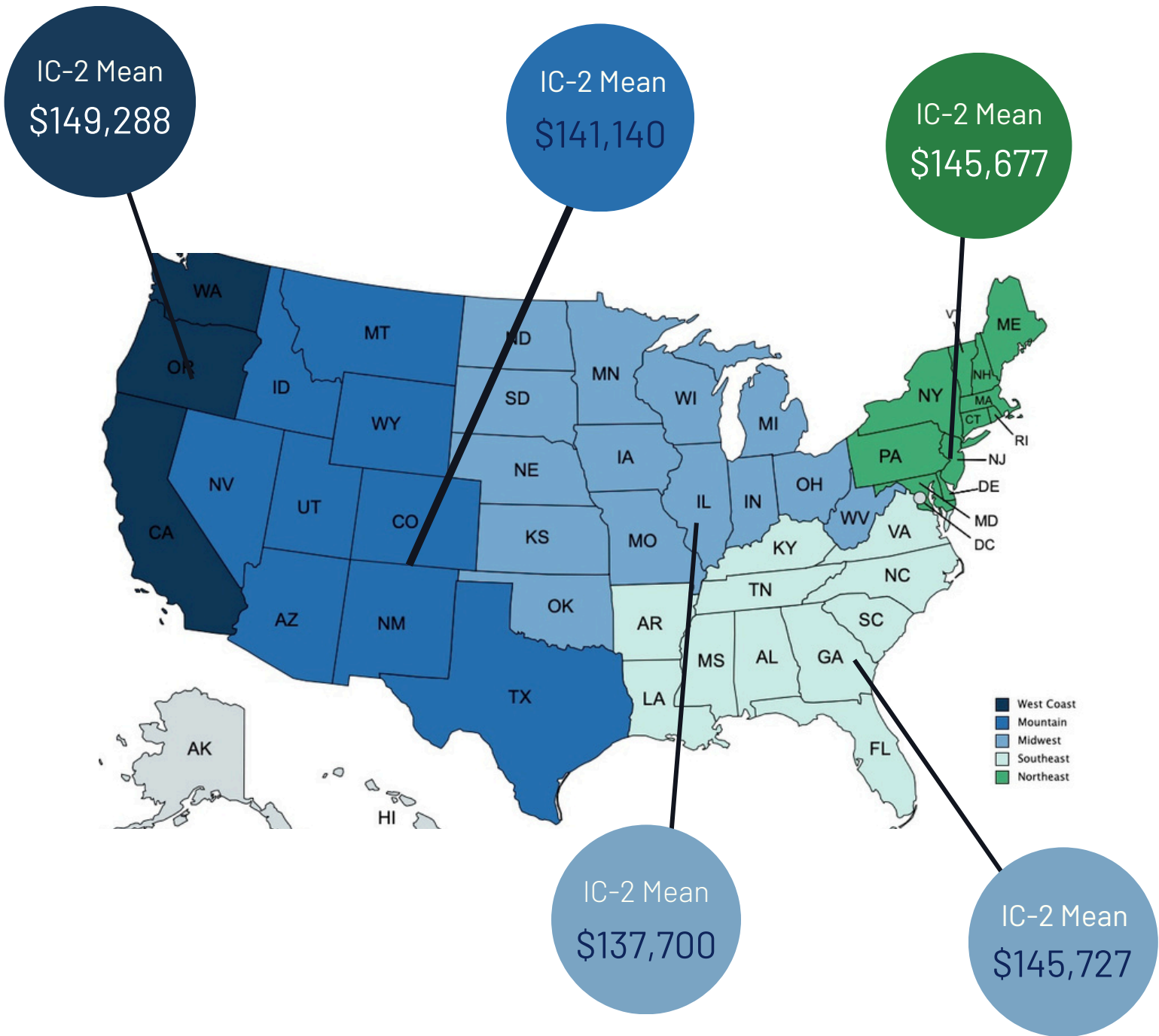
Level	Region	Base Salary			
		25%	Median	Mean	75%
IC-1	Midwest	\$88,825	\$100,050	\$103,315	\$120,000
	Mountain	\$110,000	\$125,000	\$124,388	\$130,000
	Northeast	\$97,550	\$120,000	\$118,885	\$135,000
	Southeast	\$111,325	\$120,150	\$116,570	\$130,000
	West Coast	\$100,000	\$120,000	\$120,281	\$138,750
IC-2	Midwest	\$120,050	\$140,000	\$137,700	\$155,000
	Mountain	\$125,050	\$140,000	\$141,140	\$155,000
	Northeast	\$130,000	\$150,000	\$145,677	\$161,400
	Southeast	\$135,150	\$150,000	\$145,727	\$157,650
	West Coast	\$130,000	\$145,000	\$149,288	\$160,150
IC-3	Midwest	\$126,000	\$160,000	\$158,013	\$175,000
	Mountain	\$145,000	\$160,000	\$165,675	\$180,200
	Northeast	\$152,550	\$170,100	\$174,577	\$192,550
	Southeast	\$151,250	\$160,000	\$176,250	\$185,000
	West Coast	\$162,000	\$180,100	\$177,194	\$200,000

Level	Region	Base Salary			
		25%	Median	Mean	75%
MG-1	Midwest	\$135,000	\$150,000	\$150,043	\$157,650
	Mountain	\$172,500	\$185,000	\$180,000	\$192,500
	Northeast	\$150,050	\$170,000	\$165,673	\$175,000
	Southeast	\$143,825	\$155,000	\$158,825	\$170,000
	West Coast	\$175,000	\$180,000	\$191,000	\$200,000
MG-2	Midwest	\$170,100	\$190,000	\$192,754	\$200,100
	Mountain	\$187,500	\$195,000	\$195,000	\$202,500
	Northeast	\$170,100	\$180,100	\$193,405	\$200,200
	Southeast	\$176,250	\$185,000	\$183,800	\$192,550
	West Coast	\$200,000	\$220,000	\$220,589	\$250,000
MG-3	Midwest	\$200,000	\$225,000	\$232,900	\$262,500
	Mountain	\$190,000	\$190,000	\$190,000	\$190,000
	Northeast	\$225,000	\$264,000	\$265,840	\$300,200
	Southeast	\$211,325	\$232,550	\$233,800	\$255,025
	West Coast	\$200,100	\$200,100	\$200,100	\$200,100

# SALARIES BY REGION: DATA SCIENCE IC-2 MEAN

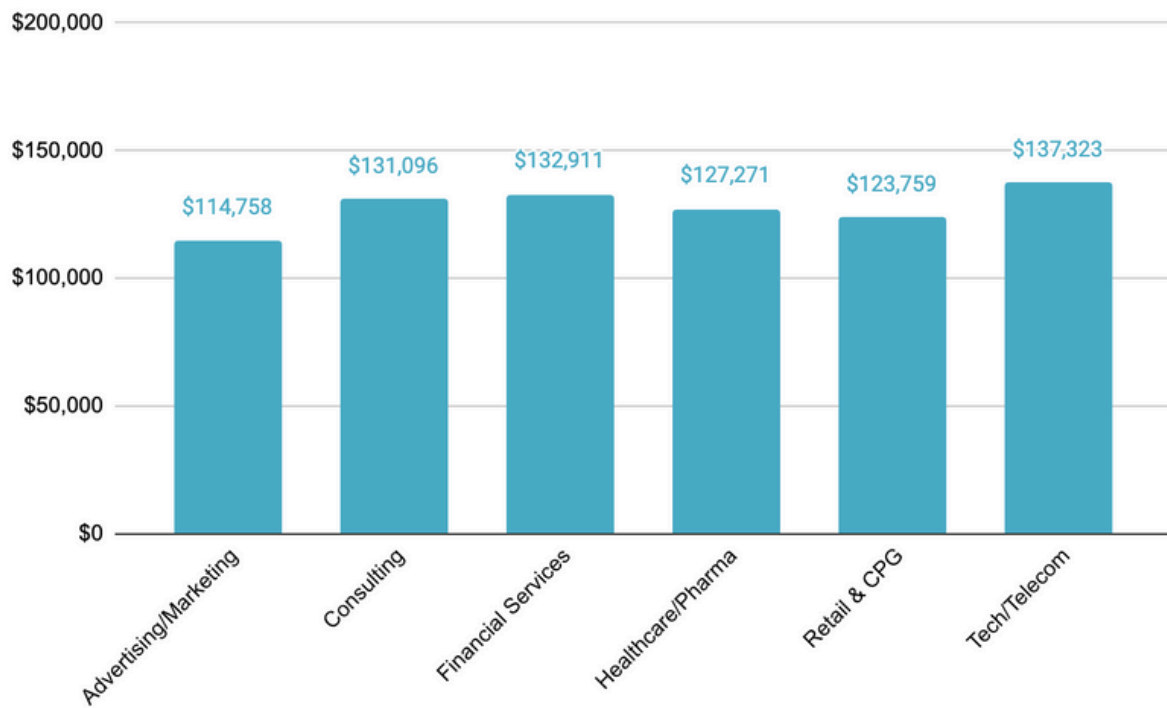


# SALARIES BY REGION: AI PROFESSIONALS IC-2 MEAN

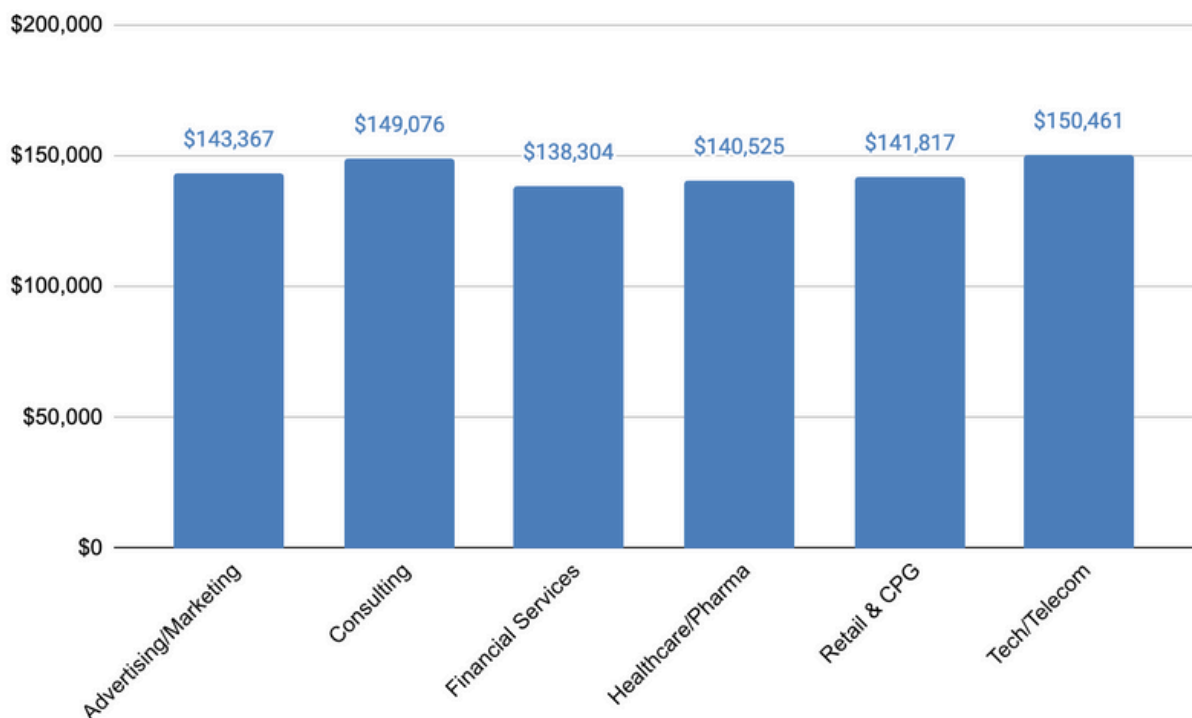


# INDUSTRY BREAKDOWNS

## Comparison of Data Science IC-2 Mean Base Salaries Across Industries



## Comparison of AI Professionals IC-2 Mean Base Salaries Across Industries



# INDUSTRY BREAKDOWN: DATA SCIENCE PROFESSIONALS

Level	Industry	Base Salary			
		25%	Median	Mean	75%
IC-1	Advertising/Marketing	\$75,225	\$80,050	\$81,115	\$85,150
	Consulting	\$80,000	\$100,000	\$101,029	\$120,000
	Financial Services	\$80,075	\$95,250	\$101,843	\$125,000
	Healthcare/Pharma	\$85,075	\$97,650	\$101,576	\$118,750
	Other	\$80,000	\$90,000	\$94,797	\$110,000
	Retail & CPG	\$75,250	\$95,300	\$97,272	\$115,000
	Tech/Telecom	\$80,150	\$100,000	\$104,161	\$125,050
IC-2	Advertising/Marketing	\$91,550	\$110,200	\$114,758	\$130,200
	Consulting	\$110,000	\$135,000	\$131,096	\$150,000
	Financial Services	\$110,150	\$136,000	\$132,911	\$150,000
	Healthcare/Pharma	\$102,500	\$125,200	\$127,271	\$150,000
	Other	\$107,325	\$125,000	\$127,245	\$150,000
	Retail & CPG	\$100,000	\$130,000	\$123,759	\$142,500
	Tech/Telecom	\$120,050	\$135,000	\$137,323	\$150,000
IC-3	Advertising/Marketing	\$122,725	\$147,550	\$150,600	\$172,525
	Consulting	\$140,000	\$168,000	\$163,707	\$180,000
	Financial Services	\$140,000	\$152,500	\$155,855	\$175,100
	Healthcare/Pharma	\$130,000	\$142,000	\$148,960	\$165,000
	Other	\$139,500	\$150,050	\$155,525	\$180,000
	Retail & CPG	\$146,000	\$160,100	\$155,342	\$170,000
	Tech/Telecom	\$137,500	\$160,000	\$166,498	\$180,000

Level	Industry	Base Salary			
		25%	Median	Mean	75%
MG-1	Advertising/Marketing	\$137,500	\$140,100	\$152,373	\$167,500
	Consulting	\$136,250	\$150,000	\$152,986	\$167,525
	Financial Services	\$135,000	\$155,300	\$151,244	\$170,000
	Healthcare/Pharma	\$125,000	\$155,000	\$149,135	\$170,000
	Other	\$130,000	\$145,000	\$147,555	\$161,250
	Retail & CPG	\$125,000	\$152,600	\$149,761	\$168,750
	Tech/Telecom	\$151,275	\$160,000	\$164,183	\$180,000
MG-2	Advertising/Marketing	\$157,700	\$170,100	\$178,205	\$187,500
	Consulting	\$167,500	\$180,200	\$187,159	\$200,000
	Financial Services	\$173,775	\$194,000	\$192,938	\$200,050
	Healthcare/Pharma	\$172,500	\$180,200	\$189,627	\$207,500
	Other	\$168,000	\$195,000	\$189,568	\$200,100
	Retail & CPG	\$171,300	\$190,000	\$192,222	\$220,000
	Tech/Telecom	\$162,550	\$180,000	\$184,346	\$200,000
MG-3	Advertising/Marketing	\$220,000	\$250,000	\$269,478	\$275,000
	Consulting	\$170,050	\$180,000	\$200,563	\$217,550
	Financial Services	\$210,000	\$230,000	\$233,747	\$250,000
	Healthcare/Pharma	\$200,200	\$207,000	\$227,460	\$255,000
	Other	\$172,025	\$245,000	\$215,688	\$270,500
	Retail & CPG	\$223,800	\$275,200	\$319,233	\$412,550
	Tech/Telecom	\$215,000	\$227,500	\$220,833	\$251,250

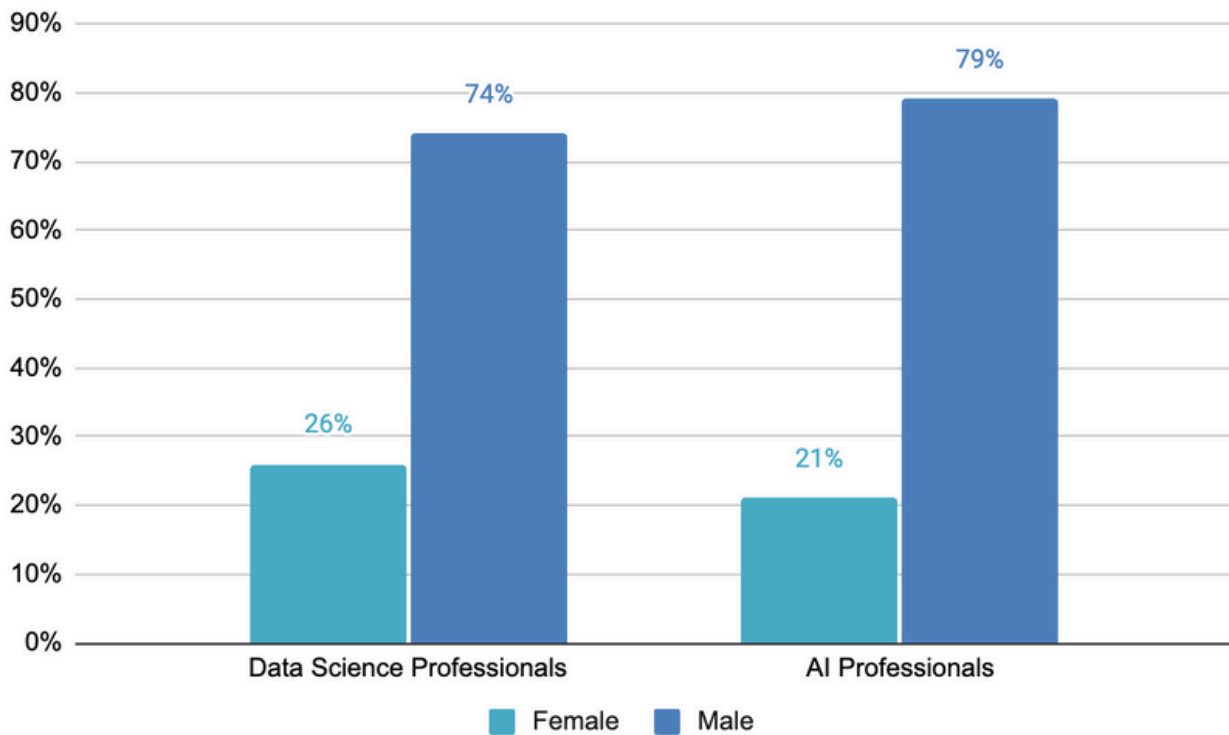


# INDUSTRY BREAKDOWN: AI PROFESSIONALS

Level	Industry	Base Salary			
		25%	Median	Mean	75%
IC-1	Advertising/Marketing	\$102,500	\$120,000	\$114,571	\$123,500
	Consulting	\$102,500	\$130,000	\$122,755	\$140,000
	Financial Services	\$92,525	\$112,500	\$110,400	\$120,000
	Healthcare/Pharma	\$100,000	\$115,200	\$118,348	\$135,000
	Other	\$90,150	\$120,000	\$115,403	\$130,000
	Retail & CPG	\$105,100	\$120,000	\$120,067	\$135,000
	Tech/Telecom	\$107,500	\$117,650	\$120,688	\$130,000
IC-2	Advertising/Marketing	\$120,050	\$150,100	\$143,367	\$170,050
	Consulting	\$130,100	\$145,000	\$149,076	\$160,100
	Financial Services	\$130,000	\$138,500	\$138,304	\$150,000
	Healthcare/Pharma	\$123,750	\$150,000	\$140,525	\$150,200
	Other	\$130,000	\$142,500	\$147,412	\$157,550
	Retail & CPG	\$122,575	\$140,000	\$141,817	\$159,025
	Tech/Telecom	\$130,000	\$150,000	\$150,461	\$167,500
IC-3	Advertising/Marketing	\$166,250	\$187,500	\$187,500	\$208,750
	Consulting	\$150,000	\$170,100	\$177,295	\$196,250
	Financial Services	\$160,075	\$170,150	\$171,300	\$180,000
	Healthcare/Pharma	\$123,750	\$155,000	\$157,958	\$170,100
	Other	\$156,250	\$171,500	\$168,350	\$185,150
	Retail & CPG	\$155,000	\$175,000	\$174,240	\$197,525
	Tech/Telecom	\$160,050	\$175,000	\$173,833	\$180,200

Level	Industry	Base Salary			
		25%	Median	Mean	75%
MG-1	Consulting	\$150,300	\$160,000	\$180,060	\$200,000
	Financial Services	\$170,000	\$175,000	\$193,000	\$180,000
	Healthcare/Pharma	\$135,000	\$157,500	\$156,500	\$168,750
	Other	\$160,000	\$175,000	\$166,060	\$180,000
	Retail & CPG	\$170,000	\$180,000	\$180,000	\$190,000
	Tech/Telecom	\$133,825	\$150,000	\$153,138	\$185,000
MG-2	Advertising/Marketing	\$222,500	\$225,000	\$225,033	\$227,550
	Consulting	\$200,100	\$212,550	\$218,800	\$231,250
	Financial Services	\$170,100	\$180,000	\$195,089	\$200,100
	Healthcare/Pharma	\$190,000	\$190,000	\$190,040	\$190,100
	Other	\$165,050	\$200,000	\$191,486	\$210,100
	Retail & CPG	\$160,100	\$177,550	\$181,938	\$185,075
MG-3	Tech/Telecom	\$175,100	\$185,000	\$201,969	\$220,000
	Consulting	\$200,000	\$275,000	\$269,040	\$300,200
	Financial Services	\$228,750	\$232,500	\$232,500	\$236,250
	Healthcare/Pharma	\$180,300	\$180,300	\$180,300	\$180,300
	Other	\$220,000	\$300,000	\$246,700	\$300,050
	Retail & CPG	\$195,000	\$200,000	\$205,033	\$212,550
Tech/Telecom	\$218,775	\$237,500	\$234,775	\$253,500	

# GENDER BREAKDOWN: DATA SCIENCE & AI SAMPLES



## Data Science Professionals

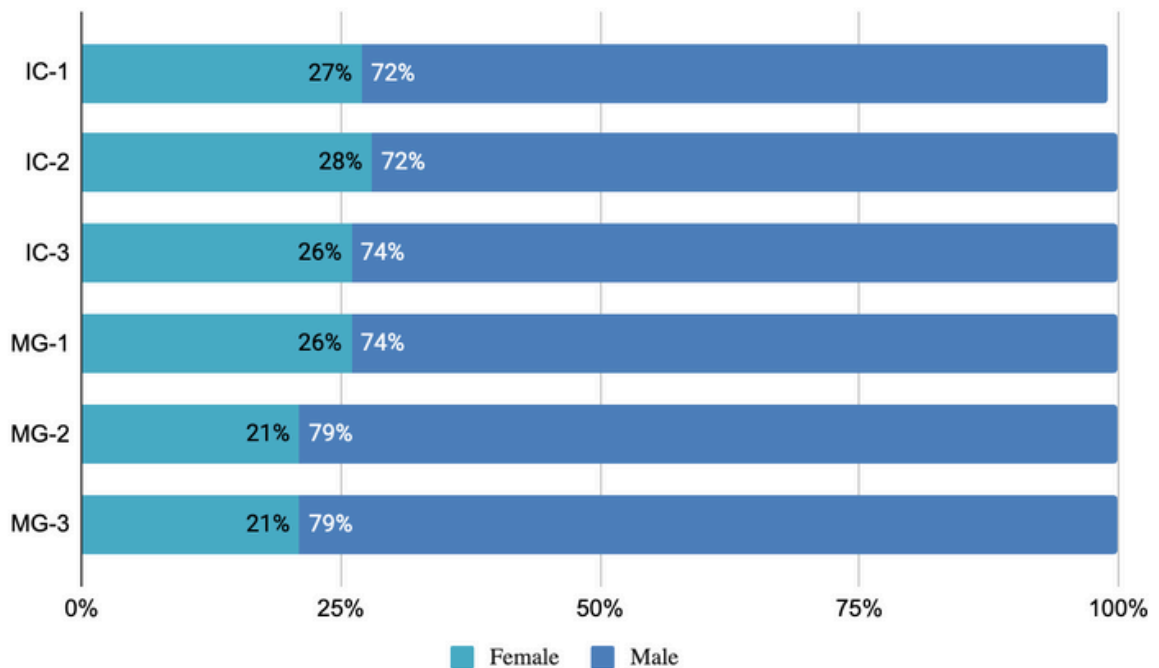
For Data Science professionals, this year's sample was 26% female and 74% male, showing a slight decrease in female representation. In 2023, the sample was 28% female and 71% male.

## AI Professionals

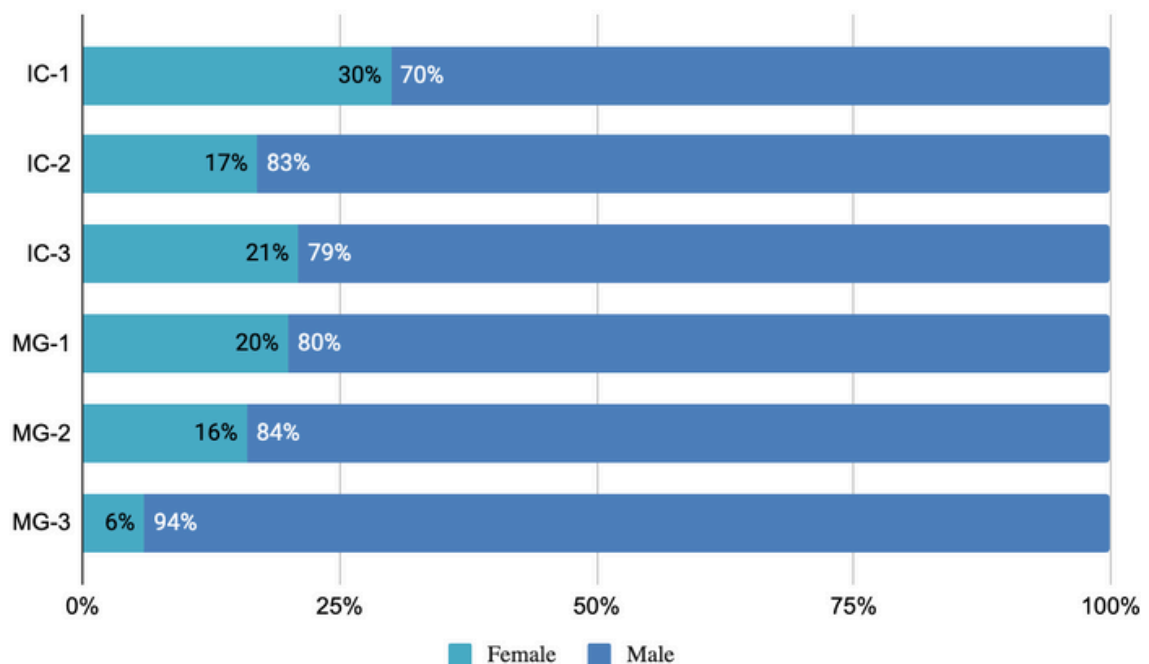
For AI professionals, this year's sample was 21% women and 79% men, showing a very slight increase in female representation from 2023 which was 20% women and 80% men. Women continue to make gradual inroads among AI professionals, but more male candidates are also attracted to the discipline so demographic shifts have been gradual.

# DISTRIBUTION OF DATA SCIENTISTS & AI PROFESSIONALS BY GENDER AND JOB LEVEL

## Data Scientist Distribution by Gender and Job Level

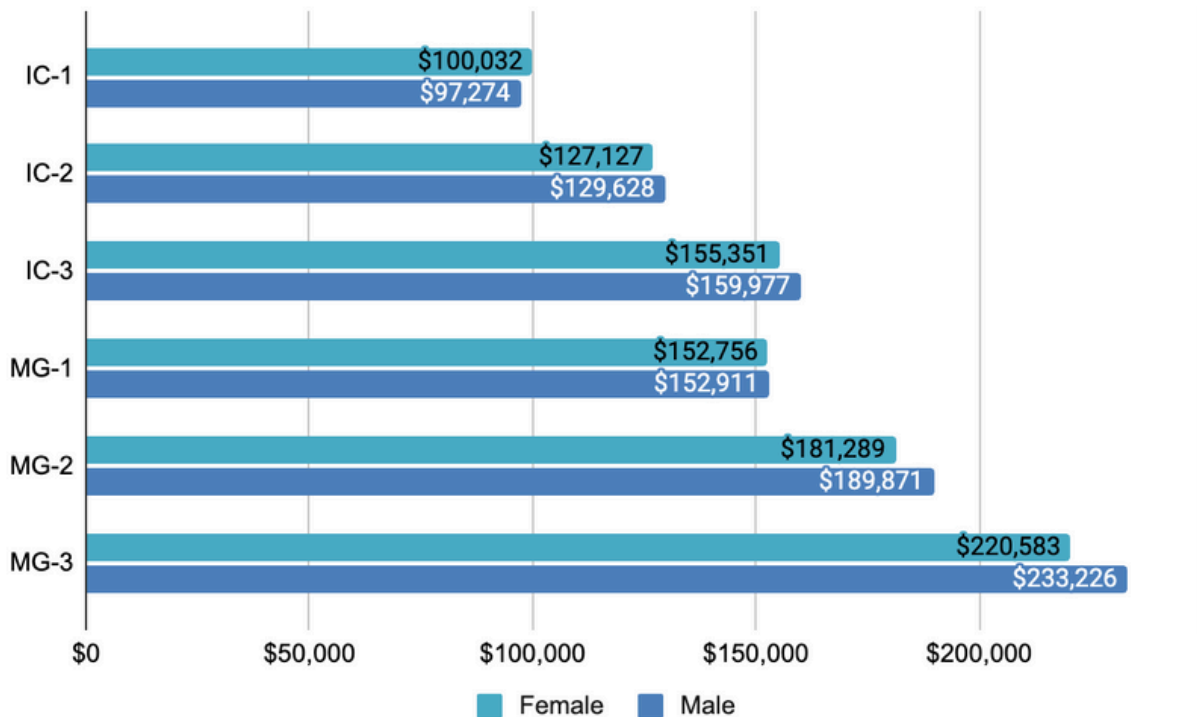


## AI Professional Distribution by Gender and Job Level



# COMPARISON OF MEAN BASE SALARIES BY GENDER

## Comparison by Gender of Data Science Mean Base Salaries

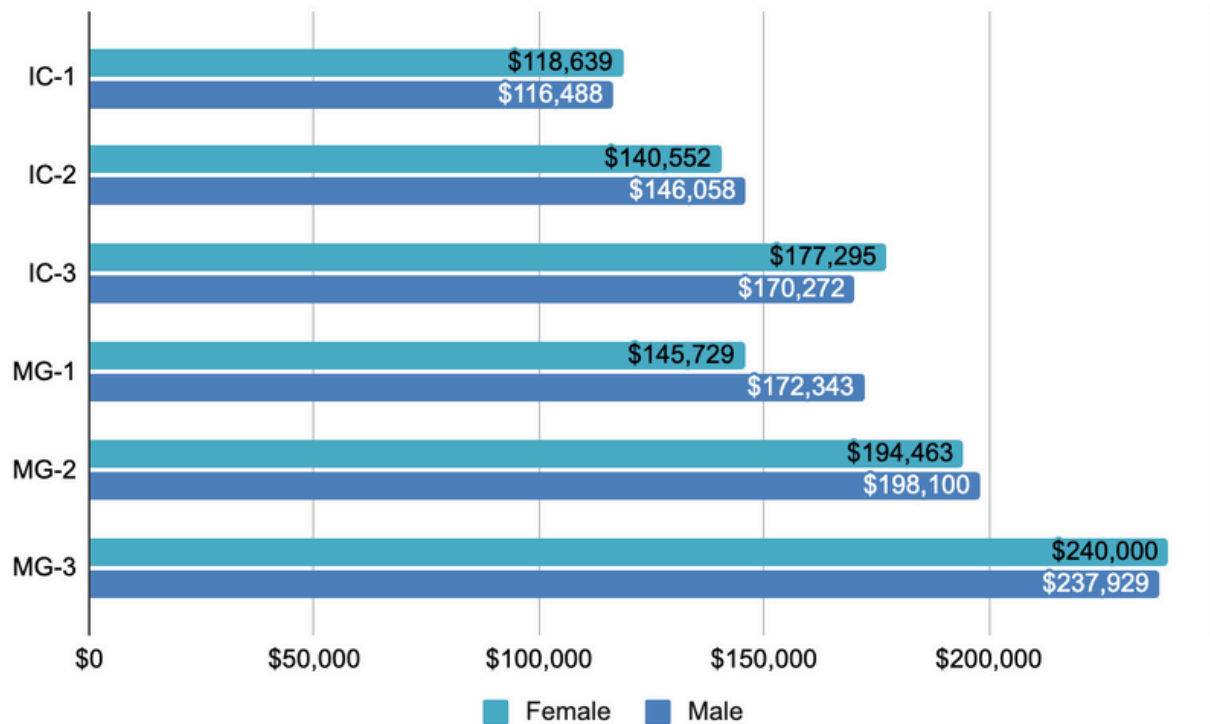


Base salaries for both males and females in Data Science are generally comparable across all individual contributor and manager levels.

Note - The sample size for women in Data Science are relatively small at the higher manager levels and thus, it is difficult to determine if the differences are significant.

# COMPARISON OF MEAN BASE SALARIES BY GENDER

## Comparison by Gender of AI Professionals Mean Base Salaries

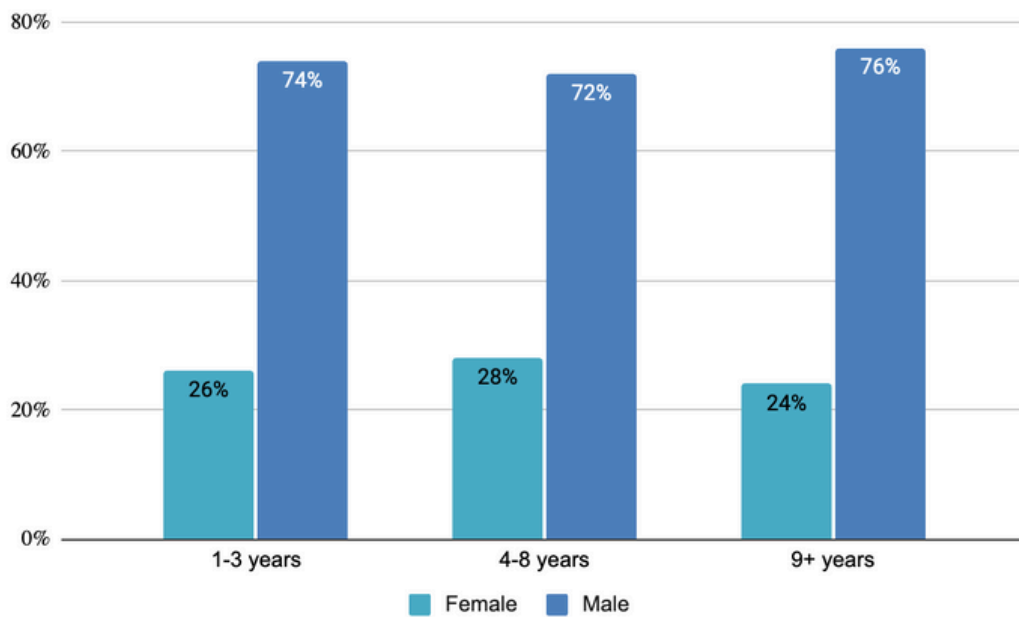


Base salaries for both males and females in AI are generally comparable across all individual contributor and manager levels.

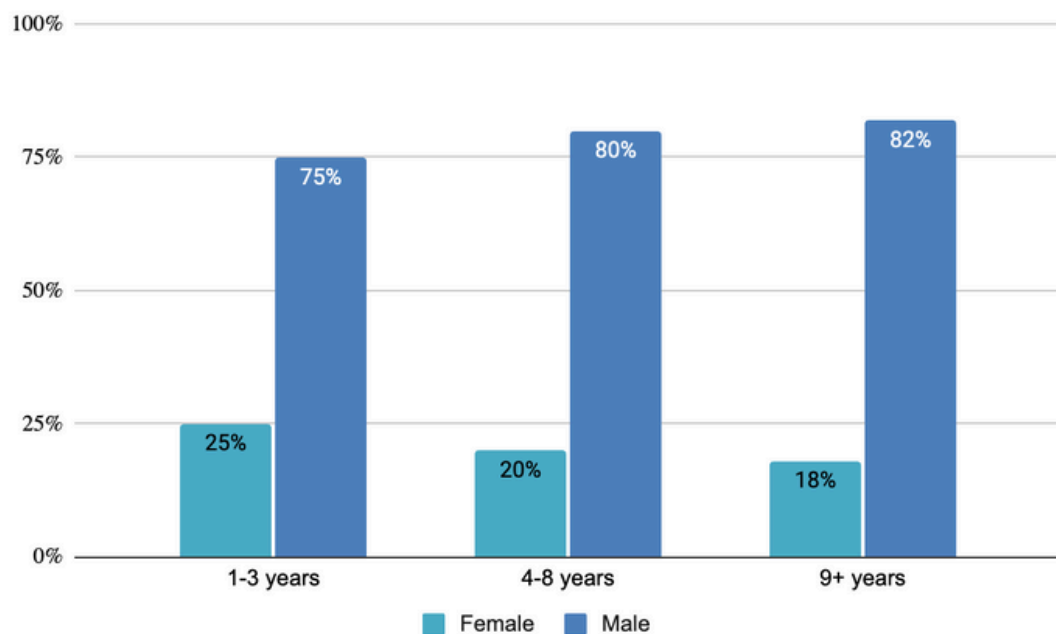
Note - The sample size for women in AI are relatively small at the manager levels and thus, it is difficult to determine if the differences are significant.

# COMPARISON OF GENDER BY YEARS OF EXPERIENCE

## Data Science Professionals: Comparison of Gender by Experience

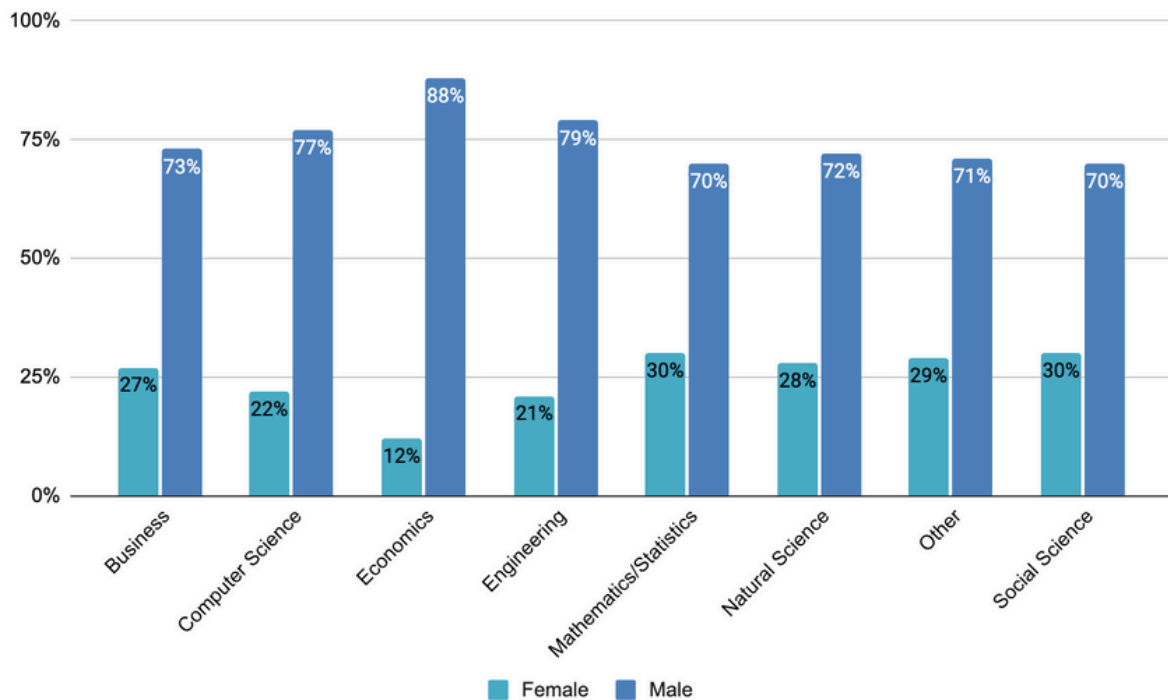


## AI Professionals: Comparison of Gender by Experience

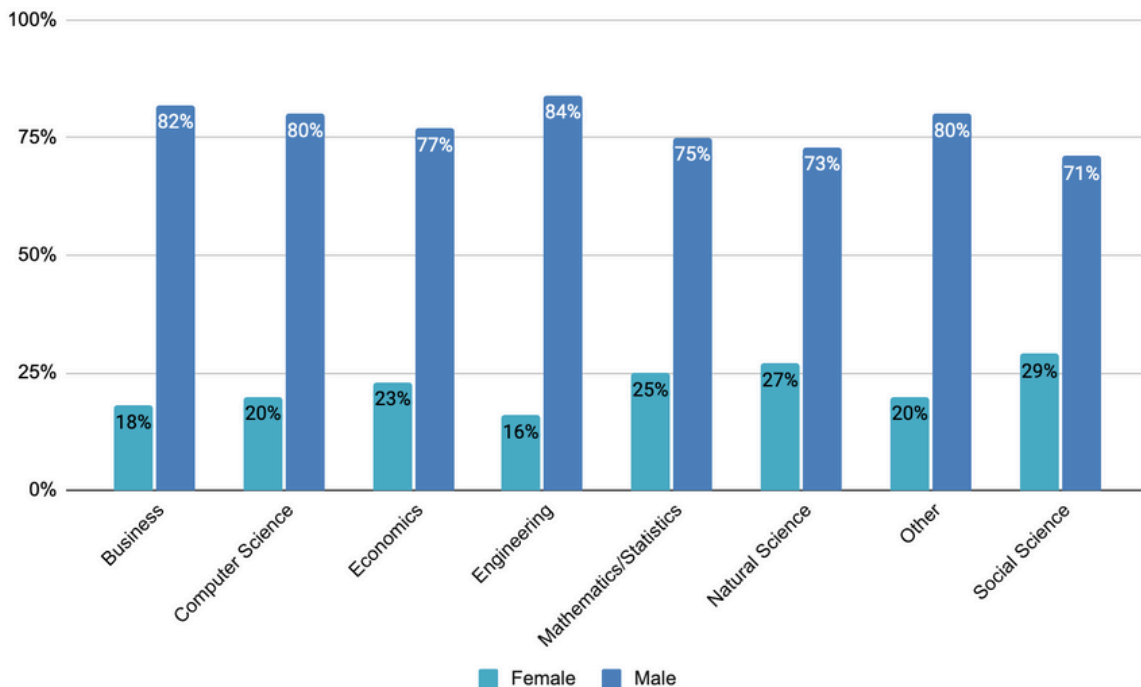


# COMPARISON OF GENDER BY AREA OF STUDY

## Data Science Professionals: Comparison of Gender by Area of Study

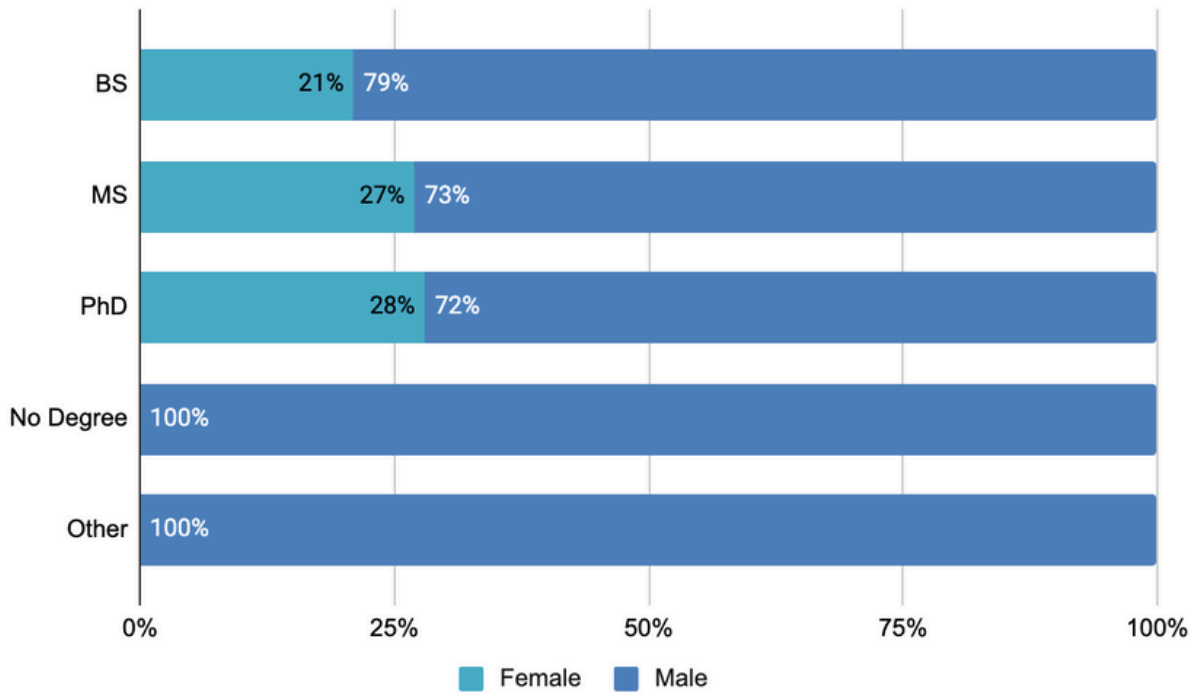


## AI Professionals: Comparison of Gender by Area of Study

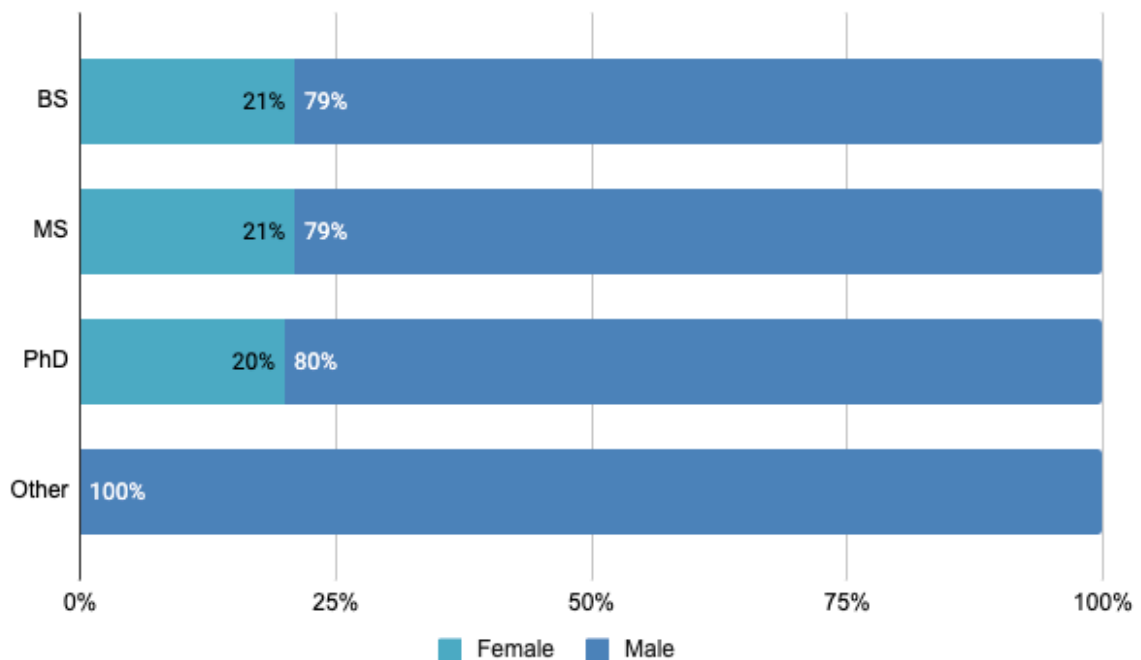


# COMPARISON OF GENDER BY EDUCATION LEVEL

## Data Science Professionals: Comparison of Gender by Education



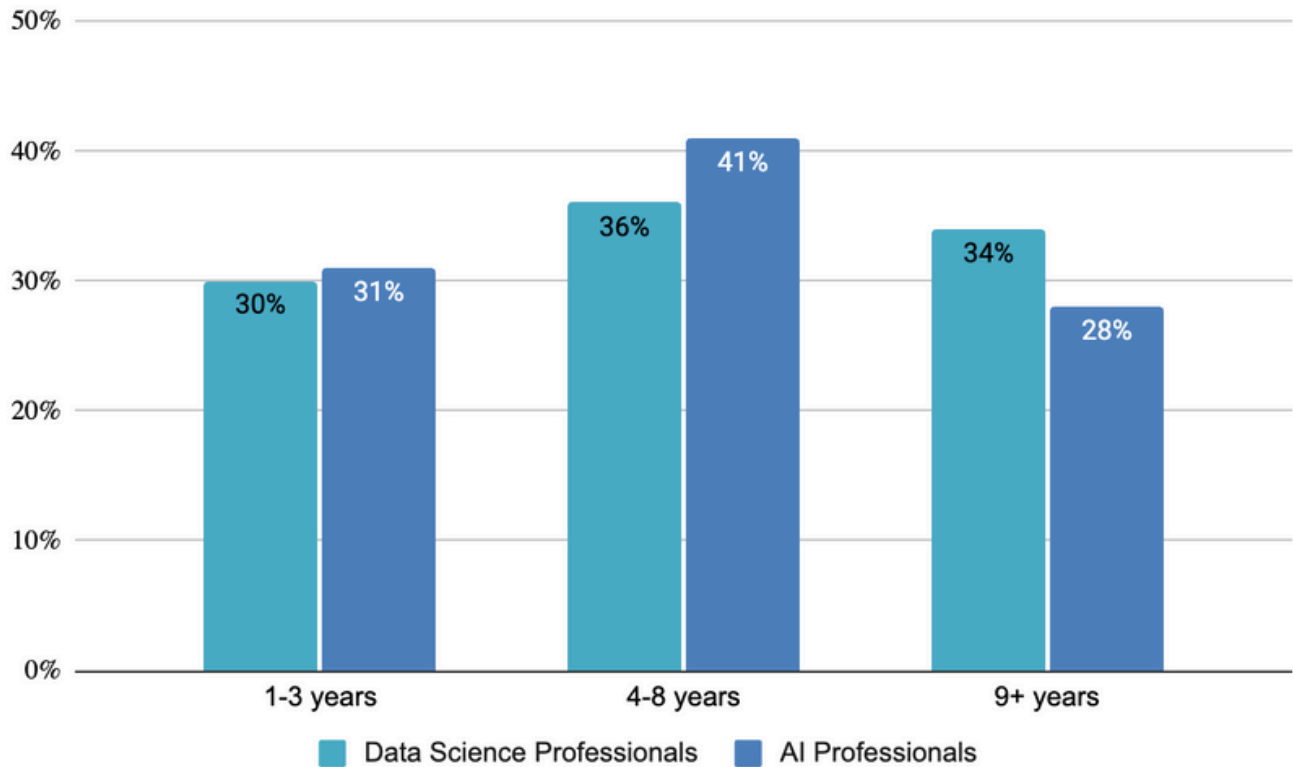
## AI Professionals: Comparison of Gender by Education





# YEARS OF EXPERIENCE

## Distribution of Data Science and AI Professionals by Experience



As AI professionals are working in a newer field, compared to Data Science, it is not surprising to see a lower percentage of AI professionals with 9 or more years of experience.



SECTION 4

# APPENDICES



## Why Women in Data Science Worldwide Reports Are Unique

The Women in Data Science Worldwide Reports: Salaries of Data Scientists & Artificial Intelligence (AI) Professionals contain highly anticipated salary and demographic data for Data Scientists and other AI Professionals, and are unique because:

- **WiDS reports focus solely on Data Scientists and AI Professionals** – The report samples include only professionals who are currently Data Scientists or AI professionals, and exclude professions that other salary reports may include, such as business intelligence, information technology, and consumer insights.
- **WiDS reports distinguish between Data Scientists and other AI Professionals** – The report separates AI Professionals (who typically work with unstructured or streaming data) from other Data Scientists because of their more specialized skillset. By comparing the two groups, the report shows how this distinction affects salary.
- **WiDS obtains this data by interviewing Data Scientists and AI Professionals** – Instead of relying on data provided by human resources departments or from a self-reported online survey, Uplink Recruitment Services interviews every professional individually. An important advantage of the interview process is that our recruiters can obtain information about these quantitative professionals that is not usually provided by human resources departments that may affect their compensation, such as education and residency status. Additionally, because of their nuanced understanding of the profession, recruiters can obtain corrections or clarifications when information provided does not seem credible.
- **WiDS salary reports show how compensation varies by job level, region, industry, gender, and education** – The sample size is large enough to show compensation data, collected over the past year, at a granular level. Further long-term trends are illuminated with each consecutive report.

## Date Science and AI Segmentation

To examine how the compensation of Data Scientists and AI Professionals varies, WiDS used characteristics of their jobs (level, location of employer, industry) and demographic characteristics (gender, years of experience, residency status) to segment data scientists. WiDS developed the following job categories:

### Individual Contributors

Level	Responsibility	Typical Years of Experience
IC-1	Learning the job, hands-on analytics & modeling	0-3 years
IC-2	Hands-on, advanced problems, may help train analysts	4-8 years
IC-3	Analytics SMEs, mentors and trains analysts	9+ years

### Managers

Level	Responsibility	Typical No. of Reports
MG-1	Tactical, leads a small team w/in a function, project execution responsibility	1-3 reports (direct or matrixed)
MG-2	Leads a function, moderately sized team, executes strategy	4-15 reports (direct or matrixed)
MG-3	Senior/executive management, determine strategy, large team	15+ reports (direct or matrixed)

# New Roles and Job Responsibilities

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**AI Ethics Officer:** Develops, implements, and oversees ethical guidelines and practices for AI and machine learning systems. Ensures that AI applications are transparent, fair, and free from biases.

**Machine Learning Operations (MLOps) Engineer:** Focuses on deploying, monitoring, and maintaining machine learning models in production. Collaborates with data scientists and IT teams to automate and streamline ML workflows.

**Data Science Product Manager:** Manages the development and launch of data-driven products. Works with data scientists, engineers, and stakeholders to ensure product alignment with business goals and user needs.

**AI Research Scientist:** Conducts cutting-edge research in artificial intelligence, focusing on developing new algorithms, models, and techniques. Publishes findings in scientific journals and presents at conferences.

**Deep Learning Engineer:** Specializes in building and optimizing deep neural networks for tasks such as image recognition, natural language processing, and speech recognition. Works with large datasets and high-performance computing resources.

**Natural Language Processing (NLP) Engineer:** Develops and implements algorithms for understanding and generating human language. Works on applications like chatbots, sentiment analysis, and language translation.

**AI Solution Architect:** Designs and implements AI solutions to solve complex business problems. Works closely with stakeholders to understand requirements and develop scalable AI architectures.

**Data Privacy Officer:** Ensures that data handling practices comply with privacy laws and regulations. Works on protecting sensitive information and developing data governance policies.

**Computer Vision Engineer:** Focuses on developing algorithms and systems for analyzing and interpreting visual data from the real world. Works on applications like autonomous vehicles, facial recognition, and medical imaging.

**AI Educator/Trainer:** Provides training and education on AI and machine learning topics. Develops curriculum and delivers courses, workshops, and seminars to students, professionals, and organizations.

**Robotics Engineer:** Designs, builds, and programs robots and robotic systems. Works on integrating AI and machine learning to enhance robotic capabilities and autonomy.

**Data Storyteller:** Translates complex data analysis into compelling narratives and visualizations. Communicates insights to stakeholders in a clear and impactful manner.

**Cognitive AI Developer:** Develops AI systems that mimic human thought processes. Works on applications such as decision support systems, cognitive automation, and AI-based problem-solving tools.

# New Roles and Job Responsibilities

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**Federated Learning Engineer:** Specializes in federated learning, where machine learning models are trained across multiple decentralized devices or servers. Focuses on privacy-preserving and collaborative AI.

**AI Quality Assurance (QA) Specialist:** Ensures the quality and performance of AI models and systems. Conducts testing, validation, and evaluation to identify and resolve issues before deployment.

**Autonomous Systems Engineer:** Develops and maintains autonomous systems, such as self-driving cars or drones. Integrates AI algorithms to enable autonomous decision-making and operation.

**AI Personalization Specialist:** Focuses on creating personalized user experiences using AI. Works on recommendation systems, adaptive learning platforms, and personalized marketing.

**AI-driven Healthcare Specialist:** Develops AI applications for the healthcare industry. Works on predictive analytics, medical imaging analysis, and personalized treatment plans.

**AI Regulation and Compliance Specialist:** Ensures that AI systems comply with regulatory requirements and standards. Works on developing frameworks for legal and ethical AI use.

**Voice and Speech Recognition Engineer:** Develops algorithms and systems for recognizing and synthesizing human speech. Works on applications like virtual assistants, transcription services, and voice biometrics.

# Appendix B: Glossary of Terms

This section provides definitions of terms used in this report.

**Analytics Professionals.** Artificial Intelligence (AI) Professionals. A specialized predictive analytics professional who has both the programming proficiency required to make enormous sets of unstructured data accessible and also the analytical skills for deriving useful information from those data.

**Base Salary.** An individual's gross annual wages, excluding variable or one-time compensation such as relocation assistance, sign-on bonuses, bonuses, and long-term incentive plan compensation.

**Data Scientist.** Individuals who can apply sophisticated quantitative skills to data describing transactions, interactions, or other behaviors to derive insights and prescribe actions. They are distinguished from the "quants" of the past by the sheer quantity of data on which they operate, an abundance made possible by new opportunities for measuring behaviors and advances in technologies for the storage and retrieval of data.

**F-1/OPT.** A residency status that allows a foreign undergraduate or graduate student who has a non-immigrant F-1 student visa to work in the U.S. without obtaining an H-1B visa. The student is required to have either completed their degree or pursued it for at least nine months.

**Geographic Region.** One of five groups of states that together comprise the entire United States. These five groups of states - Northeast, Southeast, Midwest, Mountain, and West Coast - are shown in Figure 31 on page 52.

**H-1B.** A non-immigrant visa that allows a U.S. firm to temporarily employ a foreign worker in a specialty occupation for a period of three years, which is extendable to six and beyond. If a foreign worker with an H-1B visa quits or loses their job with the sponsoring firm, the worker must either find a new employer to sponsor an H-1B visa, be granted a new non-immigrant status, or leave the United States.

**Individual Contributor.** An employee who does not manage other employees. Individual contributors among the Data Scientists and PAs in the Burtch Works sample have all been assigned to one of three levels:

- Level 1: Responsible for learning the job; hands-on with analytics and modeling; 0-3 years' experience
- Level 2: Hands-on with data, working with more advanced problems and models; may help train analysts; 4-8 years of experience
- Level 3: Considered an analytics Subject Matter Expert; mentors and trains other analysts; 9+ years' experience

**Industry.** One of eight groups of firms employing most data professionals. These eight industry categories are Academia/Government, Advertising/Marketing Services, Consulting, Financial Services, Healthcare/Pharmaceuticals, Retail & Consumer Packaged Goods (CPG), Technology/Telecom/Gaming, and Other.

**Academia/Government:** Institutions whose purpose is the pursuit of education or academic research such as public universities, private colleges, and for-profit education companies; or organizations that are a part of the governmental system, such as the Department of Defense and national research laboratories

**Advertising/Marketing Services:** An industry consisting of firms that provide services to other firms that include advertising, market research, media planning and buying, and marketing analysis.

**Consulting:** Industry that includes both large corporations and small “boutique” firms that provide professional advice to the managers of other firms.

**Financial Services:** Firms that provide money management, lending, or risk management services, including banks, insurance companies, and credit card organizations.

**Healthcare/Pharmaceuticals:** Firms that provide healthcare services, such as hospitals, and firms that manufacture medicinal drugs.

**Retail & Consumer Packaged Goods (CPG):** Organizations that purchase goods from a manufacturer to be sold for profit to the end-consumer, and companies whose products are sold quickly and at relatively low cost, including non-durable goods (e.g. groceries, toiletries) and lower quality consumer electronics.

**Technology/Telecom:** Firms that create or distribute technology products or services, such as computer manufacturers and software publishers, and firms that provide telecommunications services.

**Other:** Companies whose industry falls outside of the categories described above, such as airline companies, distribution firms, restaurants, and hospitality.

**Manager.** An employee who manages the work of other employees. Managers among the Data Scientists and AI Professionals in the Burtch Works sample have all been assigned to one of three levels:

**Your trusted source for Data Science and AI professionals' talent solutions, managed services, research and industry insights.**



**Women in  
Data Science  
Worldwide**