Salary Trends in AI and Data Science Jobs (2019–2025)

I. Overview

Between 2019 and 2025, AI and data science roles have undergone significant transformation. This report presents a professional analysis of salary patterns, job formats, company types, and regional trends based on comprehensive data, including the latest from Q1 2025. It provides clear insights and practical conclusions, aiming to guide professionals, students, recruiters, and companies.

II. Salary Growth by Experience Level

From 2019 to 2025, salaries have increased steadily with experience. Entry-level roles (EN) show strong starting pay, averaging near $100K, reflecting high demand for AI skills. Mid-level (MI) roles experience a sharp jump, while senior (SE) roles show further gains. Executive roles (EX) earn the most on average, but some technical senior roles surpass them due to skill scarcity and technical complexity.

Roles like AI Architects and Machine Learning Tech Leads have occasionally outpaced director-level pay. This shift shows the market now values technical ownership and impact more than pure management titles.

III. Company Size and Unexpected Salary Patterns

Medium-sized companies (M) offer higher average salaries than large ones (L). While this seems unusual, it is likely because:

1. The dataset contains fewer large companies, which may skew the data.

2. Many medium firms are fast-growing or highly specialized, competing aggressively for talent.

These firms may offer higher salaries to attract experts in a competitive hiring environment.

IV. Work Type Impact on Compensation

Job format (on-site, remote, hybrid) significantly affects salaries:

- On-site roles pay the most, averaging $153K.

- Remote jobs follow closely at $147K.

- Hybrid roles lag far behind, averaging only $81K.

Three main reasons may explain this:

1. Hybrid roles are often junior or support jobs.
2. They may be located in lower-paying regions.
3. Companies may still undervalue hybrid setups compared to clearly defined on-site or remote roles.

V. Employment Type and Remote Pay

Remote work has little effect on full-time (FT) salaries. However, remote part-time (PT) and freelance (FL) roles often command a premium. Companies are willing to pay more for short-term remote access to specific skills, particularly in advanced AI domains.

VI. Geographic Differences in Salary

While most roles in the data are based in the U.S., it does not lead in salary. Qatar (QA) and Australia (AU) rank higher in average pay for some experience levels. For example, Australia pays $358K on average for executive roles, while Qatar offers $300K for mid-level roles.

Some smaller countries—like Czechia and Venezuela—show unusually high averages for specific roles. These spikes are likely due to local demand surges, currency factors, or limited sample sizes.

VII. High-Paying Roles

The highest-paying roles from 2019–2025 include:

- **Analytics Engineering Manager**
- **ML Tech Lead**
- **AI Architect**
- **Machine Learning Performance Engineer**

These roles often combine leadership with deep technical skill. In contrast, some traditional leadership titles (e.g., Director of ML) earn less, showing that hands-on impact is more valued in AI.

VIII. Entry-Level Salary Insights

Entry-level jobs in AI and data science pay strongly, especially for research-oriented roles:

- Research Scientist and AI Researcher roles often exceed $175K.
- Practical roles like Applied Scientist and ML Scientist pay slightly less.

Surprisingly, some leadership titles appear among top entry-level salaries. This may result from rapid promotions or title inflation in startups. Countries like Czechia, Egypt, and Bosnia report entry-level salaries above those in the U.S., likely due to unique local market conditions.

IX. Work Format by Experience Level and Company Size

- On-site jobs dominate for entry-level workers (79%).
- Remote work increases with experience, reaching 27.5% at the senior level.
- Executives are more likely to work remotely, reflecting autonomy and trust.

Small companies (S) prefer remote setups, while medium firms (M) strongly favor on-site. Large companies (L) offer the most balanced mix. Medium companies show almost no hybrid roles (0.1%), which could hurt their appeal to experienced candidates.

X. Key Findings and Recommendations

- **Technical expertise now rivals leadership in compensation.** Professionals can pursue high-paying careers without moving into management.
- **Hybrid roles need reevaluation.** The pay gap suggests they are either undervalued or not well-integrated.
- **Medium companies should adopt more flexible work options** to stay competitive.
- **Emerging markets offer strong opportunities**, especially for new graduates or specialists.
- **Remote flexibility is a key benefit for senior and executive roles.** Companies should consider offering it more broadly.

XI. Looking Forward

As 2025 continues, we expect salary dynamics to evolve further due to:

- Continued rollout of advanced models like GPT-4, Claude, and Gemini.
- Increased enterprise investment in AI tools and infrastructure.
- Growing demand for roles in AI ethics, MLOps, and NLP.

The trends between 2019 and 2025 show the rise of technical leadership, geographic compensation shifts, and the importance of flexibility. Future reports will benefit from more global data and real-time market insights.

XII. Conclusion

The AI and data science job market has matured significantly between 2019 and 2025. Salaries are influenced most by experience level, job type, company size, and geography. Technical roles with direct impact now often pay more than executive titles. Remote work continues to gain ground, while hybrid formats remain undervalued. This report aims to support transparent decisions for professionals and employers navigating a rapidly changing field.

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