

alteryx

2025

State of Data Analysts in the Age of AI



TABLE OF CONTENTS

- 01 Executive Summary
- 02 Top 10 Insights
- 03 The Importance of AI-Ready Data
- 04 AI and Automation for the Win
- 06 From Analyst to Strategist
- 08 The Future is Bright for the Data
- 10 Recommendations and Actions
- 11 About the Research

Executive Summary

Due to the meteoric rise of AI and its reliance on high-quality data, data and analytics experts are becoming increasingly critical to business strategy as their role grows in influence. In fact, **the demand for data scientist jobs is expected to increase by about 35% by 2031.**¹ Data-driven decision making is not only saving companies money but also streamlining operations, improving efficiency, and guiding financial planning.

The role of the data analyst lives at the intersection of two very important applications of AI: one, the use of AI for the automation of analytical tasks, allowing analysts to shift to more strategic work; and two, the analyst as the arbiter of clean, accurate, and unbiased data for AI to function effectively. Analysts are tasked with ensuring this data is well-prepared, and their strategic expertise is vital in helping organizations leverage AI to its full potential.

Despite the fact that most analysts still rely on spreadsheets to manage, organize and ensure the quality of their data, which can be inefficient and prone to errors, there appears to be a movement afoot that is empowering these unsung heroes to change the way they work.

As AI and automation reshape their roles, many analysts see new possibilities for contributing strategically to their organizations.

Our research looks at the growing influence of these data and analytics experts on business strategy. What has the rise of AI meant for the possibilities of the job? We explore the ways in which data analysts have adopted AI and analytics automation tools, and the significant difficulties presented by data issues. We also address the pressing question for data analysts: could AI eventually replace them entirely? We explore the persistent challenges and opportunities that continue to impact data analysts in their roles.

¹ <https://www.bls.gov/careeroutlook/2023/data-on-display/data-occupations.html>

Top 10 Insights

1

In a typical work week, analysts spend **10-11 hours** collecting and preparing data.

2

The top challenges for analysts when preparing data are data complexity, data quality issues, and data privacy/security.

3

Seven out of 10 analysts (and **81%** of IT business analysts) agree that AI and analytics automation make them more effective and efficient in their roles.

4

76% of analysts are still using spreadsheets to clean and prepare data for analysis.

5

94% of data analysts agree that their role impacts strategic decision-making and **87%** say that their influence on business decisions has increased in the past year.

6

Nine out of 10 respondents say that their work leads to cost efficiencies (**86%**), improvements in business processes (**86%**), and financial planning decisions (**86%**).

7

Nearly all analysts (**94%**) agree that AI has had a positive impact on the strategic nature of their work—**45%** say to a great extent.

8

95% can respond to changes in scope or direction of projects more quickly than they could a year ago, thanks to the power of analytics and automation.

9

Only **17%** of analysts express deep concern that AI will take over their jobs.

10

90% of respondents believe that AI will facilitate the growth of their career (and within this group, **48%** think it will drive significant opportunities for advancement).

The Importance of AI-Ready Data

Data is still the lifeblood of any modern organization's operations – but as AI becomes infused into multiple aspects of these operations, the reliance on data becomes even more business-critical. AI algorithms are only as effective as the data they are trained on, requiring analysts to ensure that data added into these systems is properly prepared and of high quality.

Across the board, analysts continue to be faced with a variety of issues as they carry out this important work. **Over the course of a typical work week, they still spend an average of 10-11 hours preparing their data and collecting it from multiple sources.** Analysts report that the biggest hurdles they face in their roles are the complexity of their data (51%), data quality issues (46%), and data privacy and security (44%). **When preparing data for analysis, only 4% say they don't face any challenges at all.**

It isn't just quality that poses a challenge but also pulling data together from multiple relevant sources. Four out of ten analysts (**38%**) say that data integration presents them with a critical problem. On average, respondents use **three data sources** for an analysis task, and over half (55%) find it difficult to combine multiple data sources.

Nearly half of data analysts (46%) report that the biggest challenge they face when preparing data is quality issues. On average, respondents spend six hours each week preparing and cleaning data, with **40%** spending six to ten hours. **76%** of data analysts still use spreadsheets to tackle the task.

“Preparing and cleaning data is one of the most time intensive aspects of my role, and it comes with several challenges. However, the primary challenge is dealing with data inconsistencies. For instance, when pulling data from multiple sources, I often encounter mismatched formats, missing values or duplicate entries, and these issues require significant effort to resolve.”

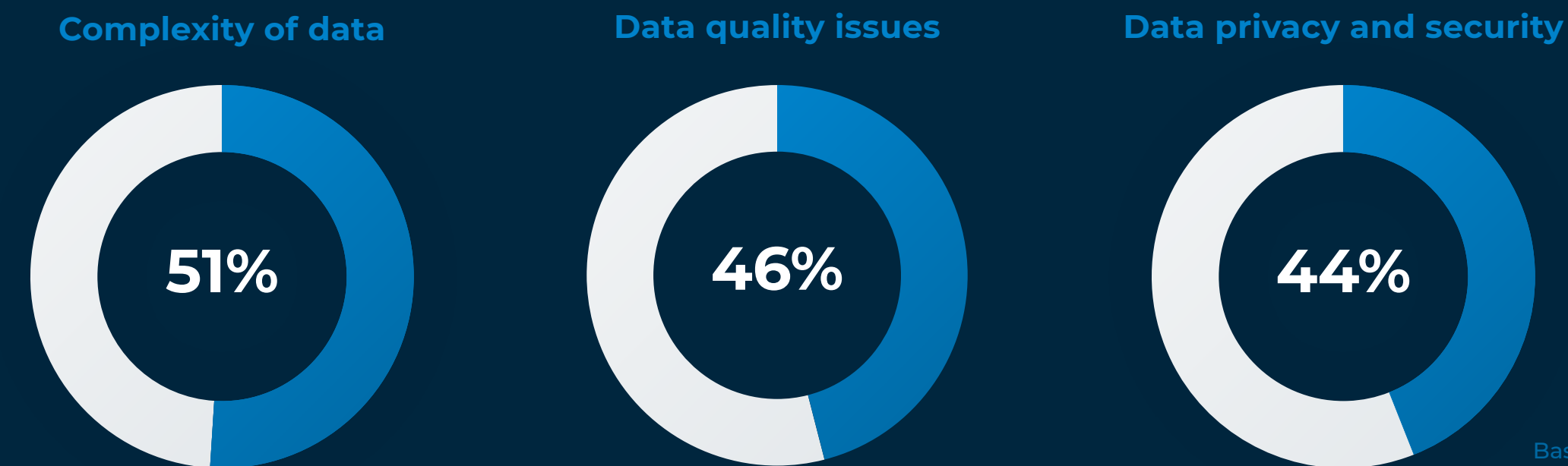
Data scientist, banking, Singapore

REGIONAL INSIGHTS: THE CHALLENGES FACED BY DATA ANALYSTS TODAY

Data complexity is a particularly pressing issue in France and the UK, where **55%** and **54%** of analysts respectively consider it to be a challenge.

Data analysts in the UK spend the longest amount of time on data collection and preparation: **11.29 hours** in a typical work week.

Figure 1: Which challenges, if any, do you face when preparing data for analysis?



Base: All respondents (1,400)

AI and Automation for the Win

However, matters are improving with the assistance of AI: **79% of respondents say that within the past year, it's become easier to combine multiple sources of data.** AI and analytics are making the lives of data analysts less difficult, even if there's still work to be done.

It's not surprising that **86%** of survey respondents say the integration of AI tools has improved their job satisfaction in the last year, including **41%** who say it's made an especially significant difference. Six in ten (**59%**) directly attribute the change to increased efficiency and productivity, while **46% say that AI tools reduce workload and stress.** A similar proportion of respondents (**83%**) say that analytics automation tools have improved their job satisfaction over the same time period, with **56%** specifying that these technologies increase efficiency and productivity.

"Unstructured or missing data requires a time-consuming process of standardizing entries before we start drawing meaningful insights. Another issue is data integration. I generally work on Tableau, because it's good for visualization, but it sometimes requires other tools like Alteryx or Python for intricate transformation."

Business analyst, public sector, US

81%

of this group (against a global average of 73%) report that analytics automation is making analysts more effective and efficient.

51%

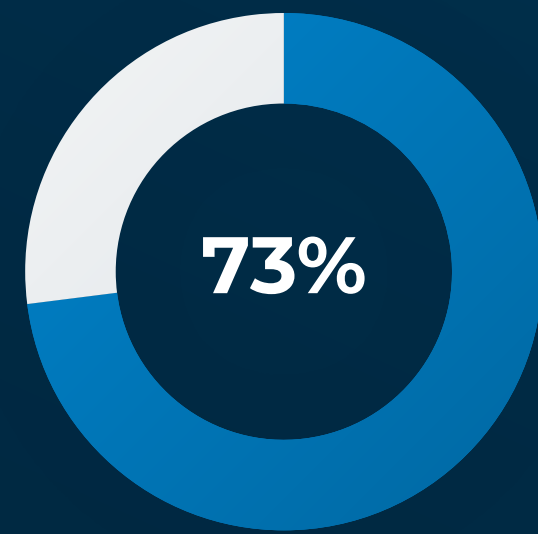
of IT business analysts (against a global average of 41%) say that the integration of AI tools has greatly improved their job over the past year.

REGIONAL INSIGHTS: AI & THE ROLE OF THE DATA ANALYST

In Saudi Arabia, data quality issues are a particular challenge for data analysts, raised by **56%** of respondents (against a global average of 46%).

Eight out of ten data analysts in Singapore (**83%**) are relying on spreadsheets to clean and prepare data for analysis against a global average of 76%

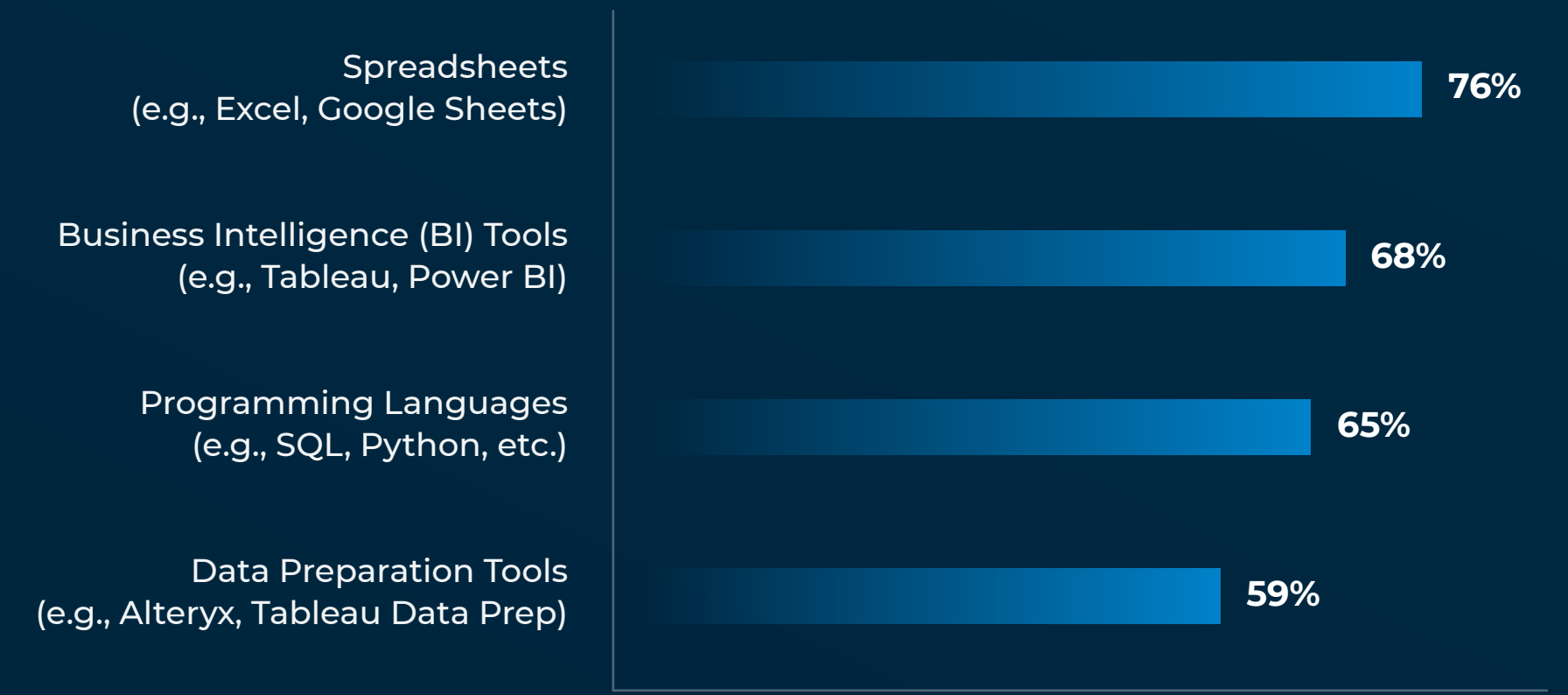
Figure 2. To what extent do you agree or disagree with the following statements?



Agree that:
Analytics automation is making the analyst role more effective and efficient

Base: All respondents (1,400)

Figure 3. What tools do you use, if any, to clean and prepare data for analysis?



Base: Respondents who are required to clean and prepare data for analysis (1,291)



REGIONAL INSIGHTS: AI & AUTOMATION

Data analysts in the USA are especially likely to have adopted analytics automation tools to accelerate daily tasks. **95%** have done so, in comparison to a global average of 87%.

Analysts in the UAE feel most positive about the impact of AI on what they can achieve in their roles, with **79%** saying it makes them more effective and efficient. In Germany, an unusually high **82%** would credit analytics automation for this improvement in comparison to a global average of 73%.

From Analyst to Strategist

In 2025, the data analyst's role has been redefined as a driving force in business strategy. Organizations that previously saw it as a back-office function have come to understand it as a pivotal decision-making partner. Today, **94% of analysts affirm that their work shapes strategic decisions**, with nearly half (**46%**) reporting that it has a significant impact. This influence is accelerating: **87%** report an increase in their role's strategic importance over the last year.

Data analysts are leading transformations across three critical areas: cost optimization, process improvement, and financial planning. **86% of analysts report that their work leads to cost efficiencies, streamlines processes, and informs financial strategies. In addition to this, 84% contribute to revenue generation, 80% facilitate workforce planning, and 76% support merger and acquisitions activities.** By highlighting inefficiencies and outdated processes, analysts enable organizations to embrace data-driven change, boosting productivity and reducing operational hurdles.

The rise of advanced tools, including AI and analytics automation platforms, has launched data analysts into a new era. **Almost all analysts (94%) agree that AI enhances the strategic nature of their work**, with **45%** stating that it has a transformative impact. AI is streamlining repetitive tasks, empowering analysts to focus on innovation. Over three-quarters (**79%**) are proficient in using AI for core business functions such as financial reconciliation, compliance, tax automation, and inventory management. Notably, **37%** of respondents identify themselves as experts in these applications.

"AI has transformed my role from being seen as primarily technical to being recognized as somewhat central to strategy and decision making."

Data scientist, banking, Singapore

"AI has the ability to handle large datasets, and it can uncover complex patterns, which has also raised the importance of analytics in cross-functional planning. Now upper management increasingly relies on my insights for making decisions related to product launches, price strategies and resource allocations, as data-backed strategies have reduced the risks."

Senior data analyst, consumer goods, UK

REGIONAL INSIGHTS: FROM ANALYST TO STRATEGIST

The impact of data analysis on business strategy is particularly evident in Singapore. There, **93%** of data analysts say that their work informs the discovery of cost efficiencies and improvements to financial planning, while **92%** say it leads to improvements in business processes in comparison to a global average of 86%.

Nine out of 10 respondents from the Middle East feel that AI has changed the way they work over the past 12 months: **93%** in UAE and **91%** in Saudi Arabia agree with this statement. Eight out of 10 (**84%**) say that this shift has been evident over the past 3-5 years.

58%

of IT business analysts report that their work directly impacts cost savings 'to a great extent' against a global average of 41%.

88%

of this group state that AI has changed their role over the past 3-5 years.

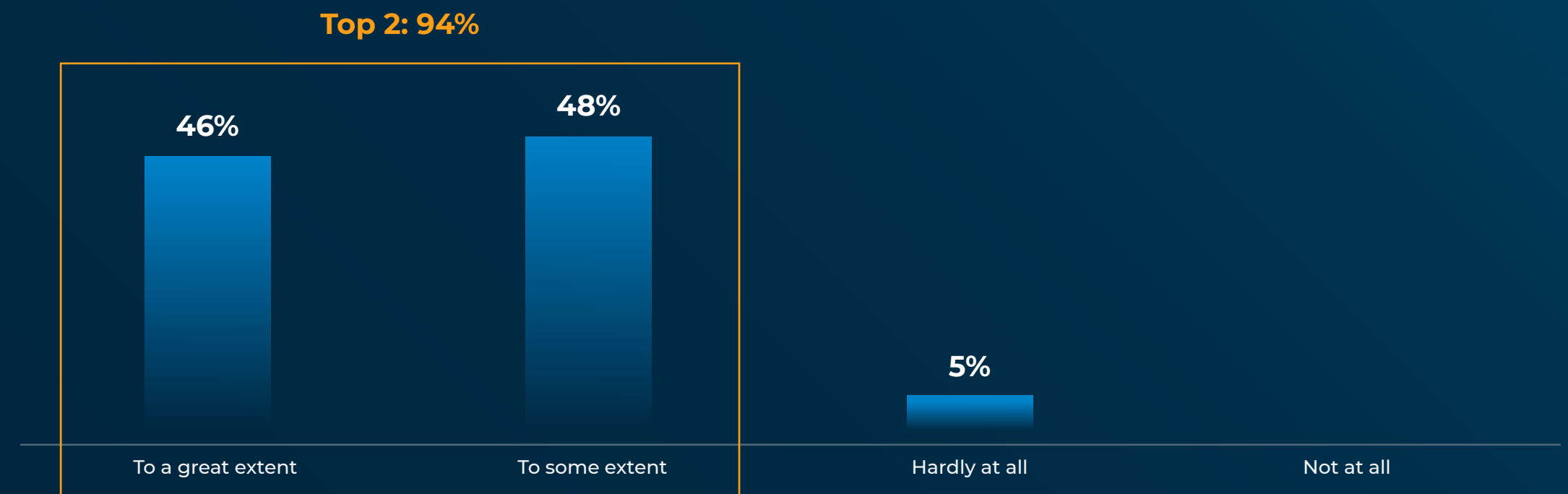
85% report they can adapt faster to shifting project scopes compared to a year ago, with **95%** crediting this shift to AI and **94%** to analytics automation. These tools have not only increased responsiveness but revolutionized workflow, with over half of respondents (**51%**) describing the impact as transformative.

Over the last year, **86% of analysts say that AI has reshaped their responsibilities**, and **43%** describe the change as profound. This is part of a sustained trajectory, with **80%** affirming that AI has influenced their work for at least three to five years.

Even as AI transforms the possibilities of the data analyst role, there is still scope for continued improvement. For **30%**, poor data quality is the main factor lessening their impact on business strategy. Equal numbers point to communication barriers (**30%**) and a lack of training and development (30%). This group would like to be able to automate the documentation of analytics workflows (**51%**), to benefit from better training on using AI tools (48%), and to have the ability to automate the communication of analytics results to stakeholders and leadership (45%). Over a third (39%) wish that AI was easier to use.

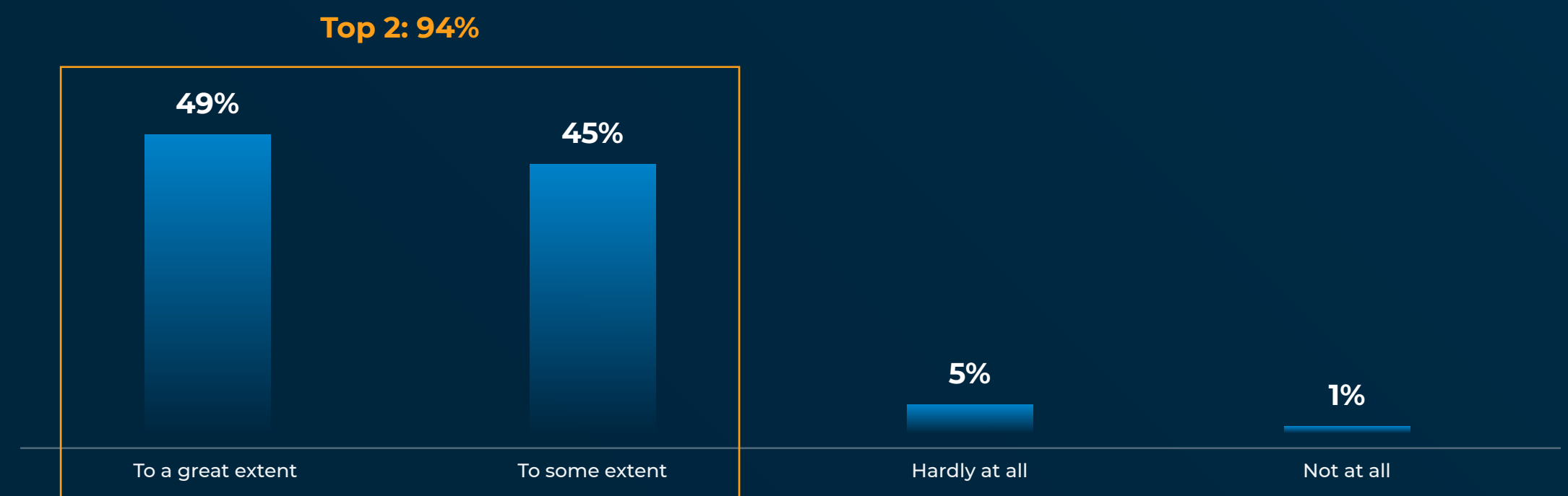


Figure 4. To what extent do you feel your role impacts business strategy decisions?



Base: All respondents (1,400)

Figure 5. To what extent do analytics automation tools help you respond to changes in scope or direction of your projects?



Base: All using analytics automation tools and experiencing scope or direction changes in projects (1,217)

The Future is Bright for the Data Analyst

The rise of AI may have raised the profile of data analysts, but it also prompts an urgent question. The pioneering technology can increase a data analyst's efficiency by taking over functions of their job and offering instant results. But will AI eventually come to replace data analysts altogether? Opinions among analysts vary, but, overall, the mood is cautiously optimistic. Only **17% of analysts are deeply concerned that AI will reduce or eliminate the need for their role.**

In fact, **90% of respondents link learning AI to career growth.** For nearly half (**48%**), mastering AI technology is believed to have a significant impact on their own advancement. Similarly, **88%** say that learning analytics automation will lead to career opportunities², with 46% expecting a significant impact. For **41% of data analysts, using AI is contributing to career growth already.**

Our survey finds that those most apprehensive about AI tend to associate the technology with job loss, ethical and legal concerns, and increased stress—stemming from the pressure to quickly adapt to new ways of working. However, more optimistic analysts observe that AI requires human oversight: certain aspects of employees' responsibilities can't be fully automated. They recognize AI as a helpful tool that supports workers and improves efficiency. It doesn't pose a threat, since it requires human intervention to verify and manage the information it processes.

The general consensus is that AI isn't just a passing trend but is reshaping the possibilities of business analysis. **73% of respondents agree that the future of business analysis lies in AI and machine learning.** This majority sentiment underscores the technology's staying power and its importance in driving business success.

² This statistic rises to 94% for IT business analysts

"There's no doubt about the fact that AI has the potential to automate many aspects of my work, such as data preparation, basic analysis, or even certain types of model building. However, I believe that the strategic, creative and interpretive aspects of my role will remain essential, as they require human judgment and a deep understanding of business context."

Data scientist, banking, Singapore

"AI has significantly impacted my skill development, especially in areas like predictive modelling and advanced analytics. It has enhanced my role within the company [...] from simply being a data analyst to a crucial contributor in advancing business innovation and strategic planning for the future."

Senior data analyst, consumer goods, UK

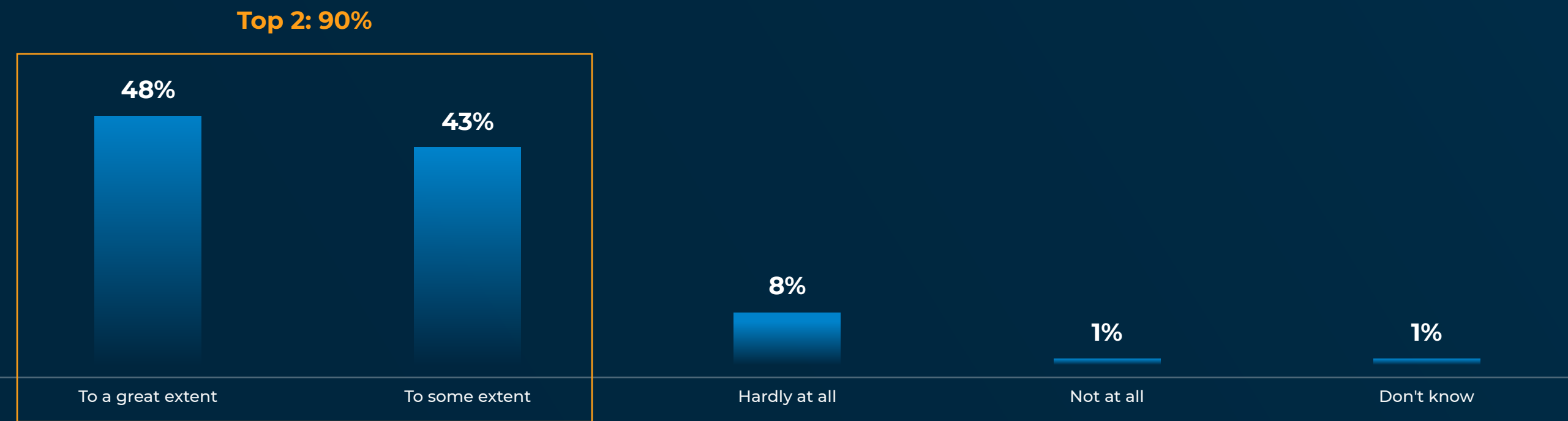
REGIONAL INSIGHTS: THE FUTURE OF THE DATA ANALYST ROLE

Data analysts in Saudi Arabia are least worried about being replaced by AI: only **9%** think it's a serious concern, while **47%** have few or no anxieties about the possibility.

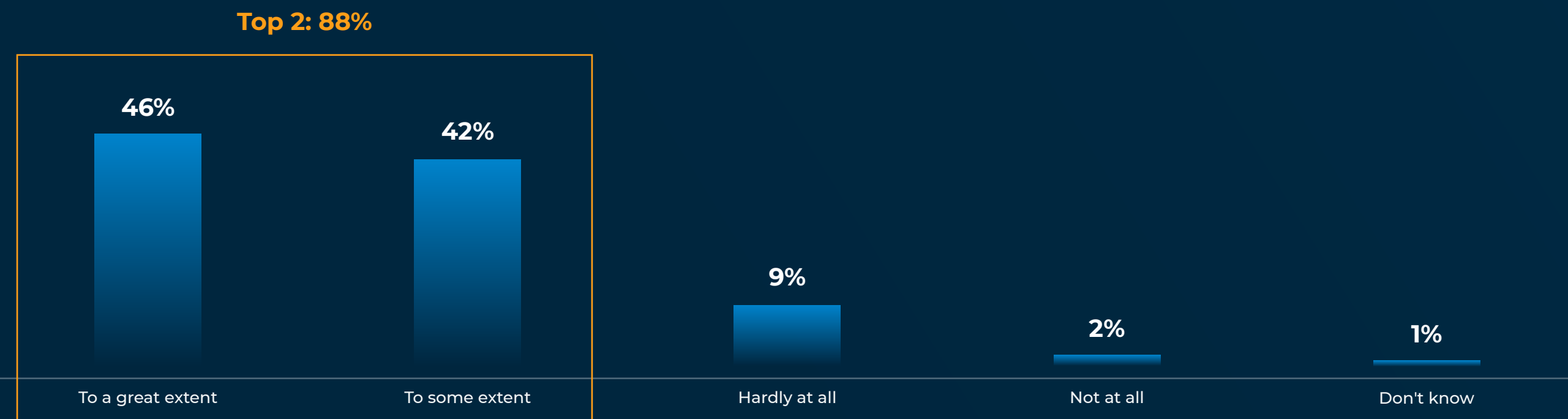
Analysts in three countries have the strongest confidence that learning AI will facilitate their career advancement. **96%** of respondents in UAE, **93%** in the USA and **93%** in Singapore believe this to be the case.

Figure 6. To what extent do you feel learning AI and analytics automation positions you for career growth?

AI



Analytics automation



Base: All respondents (1,400)



Recommendations and Actions

At Alteryx, we believe that data and analytics experts have a tremendous opportunity to ride the wave of AI – and its reliance on data -- to new heights of organizational impact and career growth.

Here are five ways that Alteryx can help data, business, and IT analysts address the recurring themes surfaced by this research with the Alteryx platform:

1

World-class data preparation and blending:

Analysts can consolidate multiple data sources seamlessly, ensuring datasets are clean and ready for analysis. Read more about how to [connect](#) and [prepare](#) your data.

2

AI-assisted data quality:

Minimize risk by automating data cleansing, identifying duplicates, and flagging anomalies.

3

AI-assisted communication and documentation:

Communicate insights effectively and optimize how you present findings and document your work. Read more about [Magic Documents](#) and the [Workflow Summary Tool](#), which automatically provides concise summaries of a workflow's purpose, inputs, outputs, and key logic steps.

4

Workflow automation:

Save time by leveraging automation that can complete end-to-end workflows, allowing for increased focus on impactful analysis. Learn more about [Alteryx Copilot](#).

5

Governance in data analytics:

Ensure that data is accurate, accessible, secure, and compliant with industry regulations. Learn more about [governance](#) at Alteryx.

About the Research

The survey was conducted by Coleman Parkes from November to December 2024, and targeted 1,400 respondents in the Americas, EMEA and APAC regions. Survey respondents have data preparation and business process improvement responsibilities, and experience of using AI within their organization. They work in banking, insurance, manufacturing, retail/consumer goods, and the public sector/education for organizations with global revenue ranging from \$50 million to over \$10 billion. The smallest employs a workforce of 500 people and the largest has more than 10,000 employees.

On average, respondents have spent four years in their current role. Their job titles include data analyst, business analyst, and systems analyst. Their job functions can be defined as IT, sales ops, office of finance, marketing ops, supply chain, and HR.

ABOUT COLEMAN PARKES

Coleman Parkes is a full-service B2B market research agency specializing in IT/technology studies, targeting senior decision makers in SMB to large enterprises across multiple sectors globally.

ABOUT ALTERYX

Alteryx powers actionable insights with the AI Platform for Enterprise Analytics. With Alteryx, organizations can drive smarter, faster decisions with a secure platform deployable in on-prem, hybrid, and cloud environments. More than 8,000 customers globally rely on Alteryx to automate analytics to improve revenue performance, manage costs, and mitigate risks across their organizations. To learn more, visit www.alteryx.com.

