

The Rise of the Citizen Data Scientist



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“Data is a precious thing and will last longer than the systems themselves.”

– Tim Berners-Lee, inventor of the World Wide Web⁷



Introduction

Data is the foundation of sound decision-making.

Whether you work in IT, marketing, sales, or operations, you've probably seen a job description that casually uses the phrase "data-driven decision-making." But for many organizations, extracting data from an overwhelming amount of content—from loan documents to scanned images, supplier agreements, customer contracts, or internal emails—is more difficult than it sounds on paper.

When technology doesn't require experience in code, machine learning, natural language processing, or artificial intelligence to use it effectively, data-driven decision-making is easy. Read on to learn what citizen data science means for your organization and how this approach makes technology more approachable for all.

What is a Citizen Data Scientist?

By collaborating with the public (“citizen scientists”) to collect, monitor, and analyze data, scientists can generate better ideas, use more rigorous data sets, or capture more accurate information without needing additional funds. Whether scientists seek answers about light pollution or bird migration patterns, by opening up projects to the public, they can find these answers more easily.¹

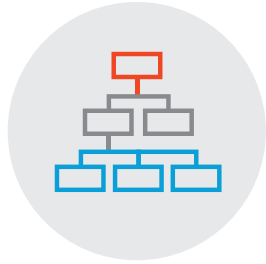
A citizen data scientist has a similar role within a business organization, partnering with data scientists. Data scientists offer immense value to an organization, and we’re only now scratching the surface of what they can do. But many companies don’t have the necessary resources to hire or create a function within their company.

Citizen data scientists amplify the value existing data teams bring to an organization by harnessing technology that supports mass delivery of data scientist principles and outcomes. They may not have an advanced degree in data science, but they are interested or skilled with statistical models, forecasting, and analytics.





Citizen data scientist (n):
a person who creates or
generates models that
use advanced diagnostic
analytics or predictive and
prescriptive capabilities,
but whose primary job
function is outside the field
of statistics and analytics²



Roles and Responsibilities

Citizen data scientists bridge the gap between day-to-day data needs (such as drilling down into the results of a specific campaign) and the advanced techniques of data scientists (such as collating massive amounts of data to predict market outcomes). They work directly with subject matter experts within the organization to analyze and interpret data. By creating a network of citizen data scientists, businesses can more easily and efficiently leverage intelligent insights from data, even with limited resources.

Role	Responsibilities
Data Scientist	Builds advanced big data models and selects and deploys algorithms, interpreting complex data sets to create action plans. Focuses on the “big picture” and trains citizen data scientists across the organization.
Citizen Data Scientist	Understands statistics and analytics and deploys basic AI-driven models under the guidance of a data scientist or easy-to-use software. Complementary to data scientists and are embedded within other teams.
Subject Matter Expert	Industry or process-specific expertise to make sense of patterns or results of a given data set. Sits within a given department to provide context to decision-making needs.

Source: Forbes: The Citizen Data Scientist



7 Skills All Citizen Data Scientists Should Have

Anyone can become a citizen data scientist with the right tools and technology. To help you name the citizen data scientists within your organization, look for these key skills²:

1. **Big-picture vision and goals for the organization**
2. **Analytical mindset**
3. **Ability to juggle priorities and determine what matters most to the business**
4. **Network of connections with subject matter experts**
5. **Expertise within individual business area to understand how data will be applied**
6. **Hands-on attitude with the ability to juggle multiple projects**
7. **Persuasive presentation skills on business value and results**

Identify the citizen data scientists in your organization by engaging those with the greatest curiosity, willingness to learn, and analytical skills. Then, equip them with the right software that makes it easy to discover, analyze, enrich, and deliver the right data to the people and processes who require it.

3 Ways Citizen Data Scientists Impact Your Organization

1. Unlock Data from Across the Organization

Data science is a relatively new discipline, and as such, it can be challenging to hire enough data scientists in an organization for complex modeling and decision-making.² With the right software and technology, though, citizen data scientists can tap into the power of data and amplify the influence of even a small data team. Cross-functional citizen data scientists empower your teams to make more informed decisions that help your business operate smoothly and efficiently.

Take structured versus unstructured data for example. Unstructured data—such as contract documents, supplier agreements, images, and scanned files—comprises roughly 75 percent⁶ of the existing information housed in all the repositories of an enterprise. In addition, newly created data floods into organizations at an alarming rate, further slowing workflows, customer interactions, and product development.



Cleaning up unstructured data reduces risk, simplifies compliance, and improves efficiency. By utilizing software that supports a citizen data scientist model—like Adlib’s Content Intelligence solution—organizations don’t need to rely on a small pool of highly trained talent to achieve optimal results.

“Most organizations don’t have enough data scientists consistently available throughout the business, but they do have plenty of skilled information analysts that could become citizen data scientists—their best path to advanced analytics.”

– [João Tapadinhas, Research Director at Gartner](#)⁵



2. Move from Reactive to Proactive Decision-Making

Much of what data analytics professionals provide is reactive—a snapshot of sales in a given quarter, or traffic generated from a social media campaign. This kind of analytics is useful for a real-time understanding of program performance, but they describe events that have already happened.

What if you want to make decisions about the future?

Predictive analytics and machine learning have long been the domain of data scientists. But the rise of citizen data scientists—and the right technology behind them—can help you move from reactive to proactive decision-making, looking at where to go next before your competitors do, even if you don't have the resources to invest in a complete data scientist program. They can build models to chart out the next course of action, identify ideal customers, and determine future performance.⁴



“Data scientists are kind of like the new Renaissance folks, because data science is inherently multidisciplinary.”

- [John Foreman, Vice President of Product Management at MailChimp⁷](#)

3. Accelerate the Pace of Innovation

A citizen data science model—and the technology that goes with it—equips anyone in your organization with the power of artificial intelligence, machine learning, and natural language processing. For example, Adlib's trainable AI models and citizen data scientist approach make it easy for anyone (even the least technically inclined) to use our Content Intelligence platform.

Rather than relying on a specialized team of knowledge workers, data scientists can leverage data to help your organization make better decisions, reduce business and compliance risk, automate workflows, and accelerate the pace of innovation.

In 2017, Gartner predicted more than 40% of data science tasks would be automated by 2020.⁵ How is your organization living up to that prediction?



The Final Verdict

Software that facilitates a citizen data scientist model makes data-driven decision-making easy, and machine learning and artificial intelligence available to everyone in your organization. With the right technology, you can leverage the power of artificial intelligence, machine learning, and natural language processing—combining people and technology to maximize human potential.

“It is a capital mistake to theorize before one has data.”

– Sherlock Holmes, *A Study in Scarlet*
(Arthur Conan Doyle).⁷

Democratize the Power of Data

Empower your citizen data scientists with deeper insight into risk, compliance, and business performance. Click below or call 1.866.991.1704 to schedule an overview of Adlib’s Content Intelligence platform.

[TAKE A TOUR OF ADLIB](#)



Our purpose is to create better data that amplifies human potential and maximizes business performance. How do we get there? Our content intelligence and automation solutions make it easy to discover, standardize, classify, extract, and leverage clean structured data from complex unstructured documents. In doing so, our global customers reduce risk, simplify compliance, automate processes, and enter a whole new level of performance.

Sources:

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