



# Data Science Radar

Identify and build world-class data science talent



# In search of unicorns...



Data drives modern business. Data scientists, however, remain rare.

According to the 2018 Gartner CIO Agenda, CIO's globally ranked analytics and business intelligence as the most critical technology to achieve an organisation's business goals, with data and analytics skills topping the list as the most sought-after talent.

As more organisations embrace data-driven digital transformation, there has never been a more urgent

need to upskill and resource data science teams across a wide range of sectors and departments.

But before we spend a fortune chasing anyone with the word 'data' in their CV, the first question to answer is: What is data science?

## Data Science is the **proactive** use of **data** and advanced **analytics** to drive better **decision making**



**Data:** manipulating data across a multiple dimensions.



**Advanced analytics:** understanding a range of analytic approaches.



**Proactive:** agreeing goals and communicating with the business.



**Decision making:** turning analytic thinking (e.g. models) into production code embedded in systems that deliver insight or action.

Data science is concerned with meeting diverse business challenges. Therefore, a data scientist must understand at least the possibilities of - a wide range of analytic approaches.

So, to succeed in data science, organisations just need to hire individuals who understand every analytic technique, code in every language, and are great communicators with proven operational acumen to boot? Simple.

Except 'unicorns' don't exist. And if they did, no one could afford them.

Data science is a team sport. You can't hire individuals with *all* the necessary skills. But you *can* build teams that combine everything essential for data-driven transformation.

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“A lack of data and technical capabilities is not the key reason new data science initiatives underperform; it's because most organisations approach data science as an artisanal craft. Organisations must instead approach data science as an industrial process: one that requires planning, division of labor, and cooperation.”

**Kjell Carlsson, Ph.D**  
Senior Analyst, Forrester<sup>1</sup>

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<sup>1</sup> <https://go.forrester.com/blogs/best-practices-to-scale-data-science/>

# Why building a data science team is so hard



Once we stop chasing unicorns, there are still a few more hurdles.

Data science is a dynamic, demanding and highly-valued field with incredible potential - and bewildering variety. Every data scientist has different levels of expertise; even those with broad experience are more suited to particular specialisms.

Despite the achievements of talented data scientists across numerous sectors, it can be hard to know who you're looking for and when you've found them.



## Data scientists are difficult to:

- **Define** - Data science is a rapidly evolving field with no established training or qualification and no consensus on what constitutes a data scientist. Different organisations value different analytic skill sets, and the absence of a common competency language from a certified professional body means data scientists can vary significantly between organisations.
- **Find** - Individuals with data science skills are in high demand, which puts the pressure on recruitment to identify and attract the right candidates. Sometimes they are hidden in plain sight; data science is integral to numerous specialisms and talent is typically distributed across an organisation and/or siloed.
- **Nurture** - The lack of a professional association supporting data science or an established CPD route/qualification means organisations can struggle to provide the support that promising individuals need to thrive.

So, there you have it. Everyone is competing for scarce data scientists with no reliable method of measuring competency or developing existing talent. It's not surprising that creating the perfect team is often costly and complex.



Mango draws on nearly two decades of experience working with the largest organisations in some of the world's most complex and exacting industries, delivering commercial value as both a data science analyst and key technical trainer. We are uniquely placed to determine data science capabilities and opportunities at an individual and organisational level.

# Enter - Data Science Radar



Data Science Radar provides a comprehensive assessment of data science competence to enable team leads and managers to plan their next project, training programme or hire, and help individuals choose the ideal career path(s). The software tool quantifies and maps competence in the diverse field of data science against six core traits defined by Mango - identifying relative strengths and areas for improvement at the individual and team level, and enabling users to make decisions based on evidence rather than intuition.

## The six core capabilities of data scientists



### Communicator

Uses empathy and language to inspire and collaborate with a range of colleagues; vital skills to work effectively with business stakeholders on data initiatives.



### Data Wrangler

The core skills to manipulate data of varying volume, variety and velocity into analytic-ready formats using a variety of technologies.



### Programmer

Writes production-grade code to deploy consistent insights and analytical thinking across the business.



### Technologist

Builds and deploys analytic infrastructure and products on a range of technology platforms to scale data-driven solutions.



### Modeller

Leverages effective statistical and machine learning or optimisation algorithms to convert data into wisdom.



### Visualiser

Creates powerful visual outputs to support modern visualisation approaches such as storytelling and the conveying of key findings with compelling visuals.

Of course, individuals usually have abilities in more than one area. Data Science Radar enables a team to capitalise on everyone's strength. For instance, great communicators who are also competent coders may add more value coordinating projects and bringing people together instead of becoming dedicated programmers. Likewise, the tool allows organisations to make pragmatic choices, e.g. do you need another modeller or would a team reshuffle plug the skills gap and save recruitment costs?

# Why use Data Science Radar?



Data Science Radar encourages a culture of data curiosity and an awareness of the power and potential of data, together with a commitment to personal development. The tool inspires data scientists from a variety of backgrounds and opens up the career path to talented individuals across an organisation whilst providing managers, from HR to analytics, with an instant snapshot of resources to inform their decisions.



Data Science Radar empowers individuals and enables organisations to build better teams, manage them more effectively and secure the best outcomes.



## The benefits for... organisations

- Identify and understand the skills gaps and training needs for individuals, teams and organisations.
- Streamline recruitment and make better analytical decisions using in-house talent.
- Establish a shared best practice framework and skills gaps trait model that lays the foundation for world-class data science capabilities.

## The benefits for... team leads

- Understand individuals' competencies and determine the optimum team for each project.
- Identify skills gaps and devise appropriate training.
- Assess potential candidates based on the required skills.

## The benefits for... data scientists

- Recognise each person's unique combination of data science skills.
- Make more informed career decisions.
- Create personalised training programmes mapped to Mango's data science training courses.

# Identify potential. Then unleash it.



Data Science Radar reveals the path to building world-class data science capabilities.

## Practitioners



### Self-assessment

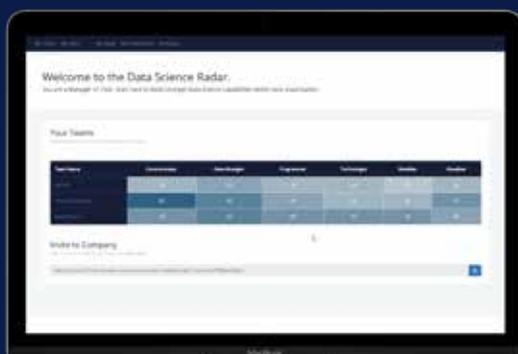
A carefully curated set of weighted multiple choice questions collects the essential information to determine each person's expertise and potential.



### Discover your personal radar

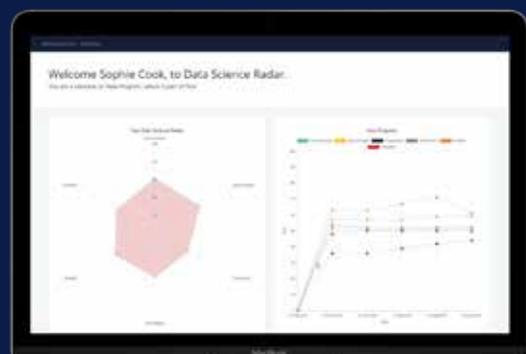
Data Science Radar visualises individuals' relative data science strengths, explains which roles best fit their skill set and provides initial suggestions for further development.

## Managers



### Assess your team, or build the next one

The Team Lead view provides an intuitive dashboard of respondents' scores across the six core competencies, allowing rapid identification of strengths, areas for improvement and potential new team arrangements.



### Enhance your performance

Individuals can reassess overtime, with different questions, to plot skill development and devise suitable training programmes to target key areas.

# The full service solution



Data Science Radar includes a combined consultancy and software-as-a-service (SaaS) solution with a low total cost of ownership.

The full service package includes everything required to assess individuals' general competence in data science and determine their unique profile.

It enables the assessment of analytic skill against defined core traits which, together, encapsulate the skills needed to deliver Data-Driven insight in a commercial environment.

## Consultancy package



**Creating a common language:** introducing and mapping common data science competencies to your organisation.



**Tailored questions addressing particular organisation challenges:** fully integrated into the self-assessment process.



**Team Management Lead:** create and view capabilities across and within teams to identify strengths and weaknesses.



**Mango hosted SaaS:** including service and support to ensure low total cost of ownership.



**In depth analysis and recommendations report of the analytics skills exist within your team/s:** identifying key strengths and weaknesses and recommendations relating to possible recruitment or training strategies.

## Ready to activate Data Science Radar?

- **Unleash your talent** - tap into your true potential and build better teams.
- **Benchmark capabilities** - get the real picture on your resources.
- **Start today** - choose your ideal low-cost plan, with no training required.

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Learn more about Data Science Radar.





Mango Solutions have been empowering organisations to make informed decisions using data science and advanced analytics since 2002.

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