MANGO SOLUTIONS

R training and consultancy services

Helping you build a world-class
data science capability

R training and consultancy services

Rapid scaling. Increased efficiency. Bigger profits. What could your organisation achieve with a world-class data science capability?

We've been helping businesses deliver commercial advantage with R for more than 16 years. Every year we empower thousands of data scientists to make better decisions while supporting data science projects from proof of concept to full-scale production. With our end-to-end solution, we can provide a validated and fully scalable environment, identify the essential data science and engineering skills to guide your recruitment, and train your team to unlock the true potential of R.

How Mango builds your R data science capability:

· **Team development** - delivered by leading R trainers led by renowned industry experts.

· **Talent and resourcing** - assess team skills and recruit to build your desired capability through Data Science Radar.

· **Validated version of R** - control your adoption using ValidR.

· **Develop and deploy R at scale** - using the full range of RStudio products.

· **Data science R consultancy services** augment your existing team or ensure value from your advanced analytics.

Why R?

R is one of the most widely used statistical programming languages in the world. And a vital tool for data science.

Much of R's popularity - and potential - stems from an active community that continually develops new packages, giving users quick and easy open-source access to a wealth of functionality. R also provides additional benefits for data scientists and enterprises.

Free to use. R provides a compelling alternative to costly proprietary software licences, making it a popular choice in business, industry and academia.

Advanced Analytics. Because of R's architecture and licensing the very latest algorithms from research are readily available. This makes R an ever evolving language which encapsulates the most modern statistical techniques and practices.

High-quality reporting. The ease at which high-quality graphics and interactive web applications can be created and written to a multitude of devices has seen R set the standard for graphical analytics. Tools such as R Markdown allow users to weave together narrative text and code to produce elegantly formatted reports.

Easy to integrate and extend. R links easily to various data sources and other programming languages. Many business intelligence systems and statistical reporting platforms now offer R connectivity as part of their extended offering; this enables users to harness additional algorithms and power up their statistical capabilities.

Why is Mango the right consultancy to help you with R?

Leaders in the R community - we have run the London R group since 2007 and host the EARL conference to nurture talent and promote the latest innovations. Rich Pugh, Mango's Co-Founder and Chief Data Scientist, was the first President of the R Consortium, of which Mango is a founding member.

Cross industry success - we have helped numerous organisations to enhance productivity and wellbeing, from optimising drug discovery and improving passenger efficiency, to determining the optimal placement of new stores and facilities.

£millions saved through data science - we leverage R from initial insights to full-scale production; improving customer services and productivity and delivering value across the supply chain.

> Over 1,000 data scientists trained in R every year - we guide talented individuals at every point on their journey, from beginner to mastery.

We are the most experienced training company in the R community. Since 2002, we have upskilled analytical and data science teams for some of the biggest brands in the world, enabling them to gain actionable insight from their data.

Mango's R training: Benefits at a glance

Global training for all skill levels
Our training pathways range from beginner to advanced level and are delivered worldwide, either in-person or both in-person and online.

Business-focused insights
All Mango trainers are consultants who use R to provide value in real-world applications; we teach practical, proven approaches and best practice - not just the theory.

Beyond R
We upskill data scientists in a variety of technical and non-technical areas, including Python, soft skills, and leadership training.

Bespoke courses
We tailor training to your business needs to ensure your teams develop the right skills for their roles.

Everything you need to become self-sufficient
We teach best practice in R and our approach is fully customised to your organisation - providing your IT department with the knowledge and skills to fully scale your in-house R capabilities.

R training courses

Pinpoint the path to data-science excellence
We assess teams and individuals and prioritise training to build internal capability, guided by Data Science Radar - a tool representing the cumulation of our experience in data science consulting and participation in the R community. Data Science Radar leverages a proprietary 'trait' model of data science skills to help organisations recruit and retain the right talent - and enable individuals to prioritise their learning and development.

The DSR traits are: Programmer, Modeller, Visualiser, Communicator, Data Wrangler and Technologist.

Breakthrough

Introduction to R for Analytics | 2 days
Programmer
Explores common data tasks, including how to import data, perform common manipulation tasks and visualise data. Introduces a variety of data types including dates and categorical data.

Fundamentals of Modelling in R | 1 day
Programmer/Modeller
The basics of analytics, including sampling, statistical testing and linear modelling. Provides the foundations for advanced analytic topics including machine learning.

Foundation

Programming in R for Analysts | 1 day
Programmer
Explains data types in R and how to interact with them at a lower level, such as how to start writing functions. Introduces further tidyverse tools for iterating over data and manipulating specific elements.

Introduction to Shiny | 1 day
Visualiser/Programmer
Shiny is a web development framework that combines interactive web applications with R. This course helps attendees to understand the building blocks of shiny and create simple applications and dashboards.

Reporting Tools in R | 1 day
Communicator
Introduces RMarkdown, a simple but effective way of creating documents directly from R. At the end of the course attendees will be able to generate reports in both HTML and Word or Powerpoint as well as create effective dashboards using flexdashboard.

Intermediate

Machine Learning in R | 2 days
Modeller
Teaches some of the most common machine learning techniques and their implementation in R. Covers defining a problem, preparing data, the range of techniques available for solving common problems and how to evaluate models and achieve the best results possible.

Intermediate R Programming | 1 day
Programmer
How to make code more user friendly, stand up to unexpected use cases, and resolve issues. Explains extended function writing topics, how to program in the tidyverse and the basics of object orientation in R as well as introducing tools for debugging and profiling.

Databases and SQL from R | 1 day
Data Wrangler
This course leaves attendees with a basic understanding of relational databases as well as the ability to connect to a database. They will also learn basic SQL statements and tools in R for easily extracting data.

Intermediate Shiny | 1 day
Visualiser/Programmer
How reactivity works in shiny, and the range of functionality available. Attendees will get a feel for some of the additional functionality available, from interacting with tables and plots to updating whole apps based on user input.

Time Series Analysis in R | 1 day
Data Wrangler/Visualisers/Modeller
Introduces some of the common time series analysis techniques as well as how to implement and understand them in R. Also covers some of the common manipulation tasks related to dates and times and how to create visualisations to aid analysis.

Web Scraping and Text Analysis in R | 1 day
Data Wrangler/Visualiser

How to get started with analysing text data, from simple manipulation and sentiment analysis through to topic modelling. By the end of the course attendees will have a good understanding of the techniques as well as how to implement them in R.

Data Visualisation in R
Data Wrangler/Visualiser

Discover and understand the principles required to create powerful visualisations which effectively and accurately communicate the stories inside data. Using the powerful an expressive ggplot2 package you will learn how to apply these principles and also the common pitfalls to avoid when creating your own visualisations.

Package Building | 1 day
Technologist/Programmer

How to get started with building packages. Including being able to write documentation more efficiently, create tests and understand the benefits of version control systems and how they can enhance your package building.

Proficient

Advanced R Programming | 1 day
Programmer

Introduces additional object oriented systems and more advanced function control. By the end of this course attendees will be able to make their code faster, more robust, and easier for end users to interact with.

Advanced Shiny | 1 day
Visualiser/Programmer

How to make apps more robust by writing reusable modules. How to test, profile and debug apps and how to add final features that make apps as user friendly as possible, from adaptive user interface to saving state of apps.

Deep Learning with Keras for R | 1 day
Modeller

Introduces the concept of deep learning, how we can use it and where we can get the most from it. By the end of the day attendees will know how they can start to practically use deep learning on their own analysis problems.

Spark and R with sparklyr | 1 day
Data Wrangler

Introduces the sparklyr package for interfacing with Spark, allowing R users to get all of the benefits without having to leave R. Includes how to connect to a Spark cluster and perform basic data tasks, and how to access Sparks machine learning capabilities and generate re-usable modelling pipelines.

Mastery

Data Science in Practice | 1 day
Communicator

Explains how a data scientist would seek to answer a specific business question using analytics - working through relevant modelling approaches, modelling best practices and data analysis and leaving attendees with the ability to put into practice what they have seen.

BREAKTHROUGH

Introduction to R for Analytics   I   Fundamentals of Modelling for Data Science

FOUNDATION

Programming in R for Analysts   I   Introduction to Shiny   I   Reporting Tools in R

INTERMEDIATE

Intermediate R Programming   I   Databases and SQL with R   I   Time Series Analysis in R   I   Machine Learning in R
Web Scraping and Text Analysis in R   I   Intermediate Shiny   I   Data Visualisation in R   I   Package Building

PROFICIENT

Advanced R Programming   I   Spark and R with sparklyr   I   Advanced Shiny   I   Deep Learning with Keras in R

MASTERY

Data Science in Practice

Validated and fully scalable R environment

ValidR offers a validated version of R that helps organisations to have more stringent controls over the use of open-source software. Perfect for a business environment, this production ready version of R is validated and reviewed by Mango's industry-leading R experts to meet the demands of end users, IT and Quality teams.

ValidR enables you to:

- Maximise assurance whilst minimising risks. Operate with confidence knowing code is robust and effective.

- Ensure compliance to industry regulation. Valid R is popular in both organisations seeking and highly regulated sectors, such as pharma, financial services and energy.

- ValidR can be used in both regulated and unregulated industries to provide a strong platform for analytic use and roll out.

Mango has a strategic relationship with RStudio - the leading provider of software for the R statistical computing environment - and assists with the development and deployment of data science at scale.

As a trusted Full Service Certified RStudio Partner, Mango delivers installation, support, training and an operating model for RStudio - enabling your organisation to adopt and grow the use of R for advanced analytics, using the full suite of RStudio products.

Buy your RStudio licences from Mango Solutions - we are happy to be the single supplier for everything you need.

RStudio installation support - our hands-on team has experience of installing RStudio products across a wide range of commercial environments, ensuring RStudio products are deployed across your business as quickly and smoothly as possible.

Ongoing support and maintenance - we can provide continuous support, either remotely or on-site; ensuring that your products deliver at speed without disruption.

From best practice consultancy services to upskilling teams and scaling R in production, Mango can help support your adoption or simply maximise the effectiveness of.

Looking for more? Whilst our heritage lies in R, we are also adept in Python and leveraging AI/ML for a variety of business needs.

Unlocking the potential of R?

Establishing a Best Practice and R Operating R Model
A global insurance company wanted to train its data scientists to exploit the power of R. However, the business struggled to scale the operation as it lacked an enterprise environment and had to run everything locally.

Mango's best practice consultancy and R environment operating model provided the skills and resources to manage their R environment entirely in-house.

Delivering a Scalable Production Deployment
A Financial Services institution wanted to take a proof of concept into full production for 120 users across the business, using the full suite of RStudio products to develop R and Shiny applications and deploy them directly into production.

Mango Solutions' Data Platform Consultants provided RStudio Installation Support and the critical skills to deliver a scalable, enterprise-level production environment. We ensured a high level of security and data integrity - including single sign-on and access to relevant data sources and thoroughly documented the deployment to enable the internal IT department to support it afterwards.

Easing congestion for Heathrow Airport's baggage operations
Heathrow Airport needs to understand how future growth impacts its baggage operation.

We helped the business to convert the existing baggage handling demand model into R, with added automation for ease of use. In addition to numerous efficiency improvements, we simulated the effect of randomness, e.g. learning how scenarios play out differently when, for example weather conditions delay flights.

The new baggage handling demand model reduces human input while flagging any problems with baggage thresholds earlier in the process, helping the airport to understand demand across various terminals and times of day, years into the future, necessary for developing baggage systems fit for the expectations of the passengers of tomorrow.

info@mango-solutions.com
Learn more about R training and consultancy services.

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

London Office

Dawson House, 5 Jewry Street, London EC3N 2EX

020 3039 3903

Chippenham Office

2 Methuen Park, Chippenham SN14 0GB

01249 705 450

info@mango-solutions.com

mango-solutions.com