

# Shiny for Production

## Overview

Shiny is ready for production, but are your apps ready?

In this workshop we will take a look at some of the techniques that you can use to prepare your apps for deployment to production environments. We will take a look at how you can add tests to your apps during development as well as a range of approaches for improving the performance of your apps. Starting with profiling, we will see how we can identify where to spend our time making improvements and share some useful advice on structuring code to reduce performance bottlenecks. We will also introduce the **shinyloadtest** package for analysing how are app will perform once deployed and see the benefits that we can get from plot caching.

## Prerequisites

This workshop is aimed at existing, intermediate to advanced level shiny users who are looking for ways in which they can take their shiny apps to the next level for deployment into production environments.

Attendees should:

- Be able to build shiny applications and have a strong understanding of reactive programming
- Have a strong knowledge of general R programming, including tidyverse packages such as ggplot2

## Outline

In this workshop we will look at four main ideas to help improve the performance of our apps:

- Testing Shiny apps with **shinytest**
  - The benefits of testing
  - Incorporating tests into our apps
  - Executing and maintaining tests
- Profiling shiny apps

- What is profiling and why do it?
- Using the profvis package to profile shiny apps
- Interpreting profvis output
  
- The **shinyloadtest** package
  - Why load testing?
  - Setting up a load test
  - Understanding the output
- The benefits of Plot Caching
  - When plot caching can help improve performance
  - Implementing plot caching in our apps

## Facilitator

**TBC, Mango Solutions**