

R Markdown and Dashboards Workshop

Introduction and R Markdown Basics

- Learning Objectives
- Infrastructure: RStudio.cloud
- Components
- Headers and Text
- Links and Images
- Math text
- Tables
- The Markdown Quick Reference
- Your turn: embellish plain text
- Your turn: publish your report
- Your turn: deploy your first dashboard

Publishing Outputs

- The R Markdown Workflow
- Embedding R code in chunks and inline
- Chunk and global options
- Output options
 - Notebooks
 - Xaringan
 - Blogdown
 - Bookdown
- Other languages
- Parameterization
- Output formats
- Document templates
- Your turn: Add some an R chunks to your R Markdown report
- Your turn: Restructure from plain R Markdown to xaringan slides

Shiny Dashboards

- What is Shiny
- How does Shiny work?
- Shiny apps versus embedding Shiny in R Markdown
- Input elements
- App elements
- Building out your app
- Your turn: Your first Shiny dashboard
- Next level Shiny: Reactivity
- Your turn: Build a reactive dashboard

Web-based Dashboards

- Interactive Parameters
- Flexdashboards
- Storyboards
- Your turn: Lay out your story
- Datatables
- HTML widgets
- Plotly, highcharter
- Leaflet maps
- Your turn: Bring your dashboard to life
- Your turn: Using more than one htmlwidget

Adding Interactivity

- Web-based
- Shiny
- Dashboards
- What makes dashboards interactive
- What makes a good dashboard design
- Client-side and server-side dashboards
- Your turn: Building your first dashboard